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INTERNATIONAL SOYBEAN VARIETY EXPERIMENT

SIXTH REPORT OF RESULTS
1978

W. H. Judy, J. A. Jacobs, and
E. A. Engelbrecht-Wiggans



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INTSOY Series Number 21

COLLEGE OF AGRICULTURE
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

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Sixth Report of Results

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E. A. Engelbrecht-Wiggans

College of Agriculture
University of Illinois at Urbana-Champaign

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Foreword

The International Soybean Program (INTSOY) is a cooperative program of the University of Illinois at Urbana-Champaign and the University of Puerto Rico, Mayaguez Campus, cooperating with international and national organizations to expand the use of soybeans. INTOY is primarily oriented to improve soybean production and utilization in the developing nations. The geographic orientation is toward tropical and subtropical areas of the world where protein-calorie nutrition problems tend to be concentrated. However, the perspective is world-wide.

The Sixth International Soybean Variety Evaluation Experiment (ISVEX) was conducted from February, 1978, to March, 1979, by co-operators in 76 countries around the world. ISVEX was initiated in 1973 as the first part of the genetic improvement program of INTOY. The objectives are to evaluate soybean cultivars (varieties) for wide environmental adaptability and to provide countries with improved cultivars for direct introduction or for use in breeding programs. The response of cultivars is analyzed for high, stable yield and other desirable agronomic characteristics. Other important dividends have been obtained through accumulation of more knowledge about the response of soybeans to different management skills, ranges of temperature and daylength, and various soil conditions. With the cumulative results from more growing seasons and locations, the objectives of this experiment are being attained.

Seeds and materials for the experiment were prepared and distributed by INTOY at the request of scientists who desired to evaluate soybeans in varying environments. Each of these cooperators provided land, labor, fertilizer, and management necessary for the experiment. These cooperators were responsible for the success of the experiment and we express our thanks and appreciation to each person and his/her organization.

The support provided by the Food and Agriculture Organization of the United Nations (FAO), the International Rice Research Institute (IRRI), the International Institute for Tropical Agriculture (IITA), and the Asian Vegetable Research and Development Center (AVRDC) for shipment of seed and materials to selected countries is gratefully acknowledged.

Leadership in organizing the 1978 ISVEX was provided by Dr. W. H. Judy, with the aid of Assistant Agronomist H. J. Hill and Assistant Programmer B. Schneider. Since the data were collected for this report, Dr. W. H. Judy has left the INTOY staff to accept a position with the United States Agency for International Development, and Dr. J. A. Jacobs assisted in completing this report. Mr. D. R. Erickson has succeeded Mr. H. J. Hill as Assistant Agronomist and Ms. E. A. Engelbrecht-Wiggans now serves as Assistant Statistician.

INTSOY is pleased to add the Sixth Report of Results of ISVEX to the INTSOY Publication Series. The First, Second, Third, Fourth and Fifth Reports of ISVEX are designated 8, 11, 15, 16, and 19, respectively, in the series.

William N. Thompson
Director
International Soybean Program (INTSOY)

INTERNATIONAL SOYBEAN VARIETY EXPERIMENT

Sixth Report of Results

This publication is the sixth report of results from the International Soybean Variety Evaluation Experiment (ISVEX), organized in 1973 by the International Soybean Program (INTSOY) of the University of Illinois and the University of Puerto Rico at Mayaguez, under a contract with the Agency for International Development, U. S. Department of State.

ISVEX was designed to meet the following objectives:

1. To test the adaptation of soybean cultivars (varieties) under a wide range of environmental conditions.
2. To provide research workers with an opportunity to compare local and introduced cultivars.
3. To provide a source of new germplasm which a cooperator can use directly or incorporate into a breeding program.
4. To identify areas of the world that have the potential for soybean production.
5. To evaluate the response of soybeans to different environments.

MATERIALS AND METHODS - ISVEX SITES

Procedures

Instructions for management and data collection for the ISVEX were sent with the seed shipment to each cooperator. Soybean seed for planting was provided to each cooperator in individual row packages. Granular inoculant was provided for distribution in the row with the seed prior to covering the seed with soil. The experiment was designed as a randomized complete block with four replications. Each variety was planted in a plot once in each block. The plot consisted of four rows 5m long and 60cm apart. All observations except root nodule activity and abundance were obtained from the center two rows. The nodule data were obtained from the border rows.

It was suggested in the instructions that a trial site be chosen which had a uniform crop history and where the soil was well drained. A soil analysis was recommended for determination of pH, organic matter, phosphorus, and potassium. It was recommended that an application of 25 kg/ha N, 25 kg/ha P, and 25 kg/ha K be broadcast and worked into the plot prior to planting.

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Sufficient seed was provided to overplant approximately 50%. It was recommended that the plants be thinned soon after emergence to a stand of one plant per 5cm.

The method of weed control suggested was mechanical or chemical, according to the facilities available to the cooperator. Chemicals were suggested for use in control of insects.

CULTIVARS

Cultivars entered in the Sixth ISVEX during 1978 were selected for various criteria, including agronomic performance, maturity group classification, seed availability, uniform seed quality, and adaptability to program design. The majority of the entries were selected from U. S. Department of Agriculture Regional Soybean variety trials. Cultivars that demonstrated consistent high yields were then selected for introduction into the ISVEX trials. There are 36 cultivars entered in the Sixth ISVEX (Tables 1 and 3). Sixteen of these cultivars were retained from the Fifth ISVEX in order to conduct a more complete evaluation and interpretation of their performance. There were 19 recently developed soybean cultivars suitable for inclusion in the Sixth ISVEX. The pedigrees of these soybean cultivars can be found in Table 1.

The cultivars were divided into three groups according to their relative maturity and were distributed among cooperators according to the environmental zone of the site. Later maturing cultivars were distributed in tropical zones while earlier maturing cultivars were dispatched to more temperate areas. These three groups were designated ISVEX A (tropical), ISVEX B (sub-tropical), and ISVEX C (temperate). The variety Williams was common to all three sets (see Table 2).

In the instructions for the ISVEX trials, it was suggested that the cooperator might substitute one or two local soybean cultivars for those which were supplied by INTSOY. Many cooperators did substitute and the data on the performance of these cultivars can be observed in the table showing the analysis of data for the particular location.

EXPERIMENT SITES

The experiment sites were divided into environmental zones which were defined according to latitude and altitude. Separating the trial sites by latitude permitted evaluation of cultivars under similar conditions of day length. Separation according to altitude permitted evaluation under similar conditions of day and night-time temperatures. There was some variation within each zone in temperature, moisture, and solar radiation. Limits of each of the 13 zones and the number of sites in each zone are shown in Table 4.

The environmental zones were defined by each 10° increment in latitude from the equator and according to three altitude ranges: 0-500m, 501-1000m, and over 1000m.

The environment dictated the optimum planting date for each site. Plantings were made throughout the year with the earliest planting date being February 15, 1978, and the last planting date being March 23, 1979.

The Sixth ISVEX was dispatched to 185 sites in 76 countries. Data were returned from 107 sites which had a coefficient of variation for yield less than or equal to 30.0%. Of these 107 sites, 39 were in Africa, 18 in Asia, 29 in South America and 21 in Europe, Mesoamerica, Middle East, North America and Oceania. Figure 1 shows the locations of countries where trials were completed. The cultivars were evaluated under a wide range of environmental conditions which are represented by sites which range in latitude from 40° 7 minutes North in Urbana, Illinois, U. S. A., to 34° 35 minutes South at Buenos Aires, Argentina, and by a range in elevation from 2m at Papara, Tahiti, to 1860m at Kathmandu, Nepal. Useful data, meaning the coefficient of variation for yield was less than or equal to 30.0%, were returned from 22 trials located between 20° North and 20° South latitudes and below 500m altitude (Table 5).

DATA COLLECTED

Data were reported for each plot by cooperators as follows:

Yield: Weight in grams of clean, dry grain from 5m of the two center rows which is a harvest area of 6m².

Days to flower: Days from date of emergence to date when 50% of the plants had flowered.

Days to maturity: Days from date of emergence to date when 95% of the pods were ripe.

Nodule number: Number of nodules on roots of ten plants at the time when the first flowers appeared and a second count of nodules three weeks after first flowering.

Nodule weight: Weight of nodules on roots of ten plants at the time when the first flowers appeared and again three weeks after first flowering.

Plant height at maturity: Height in centimeters from the ground surface to the top of the main stem at maturity.

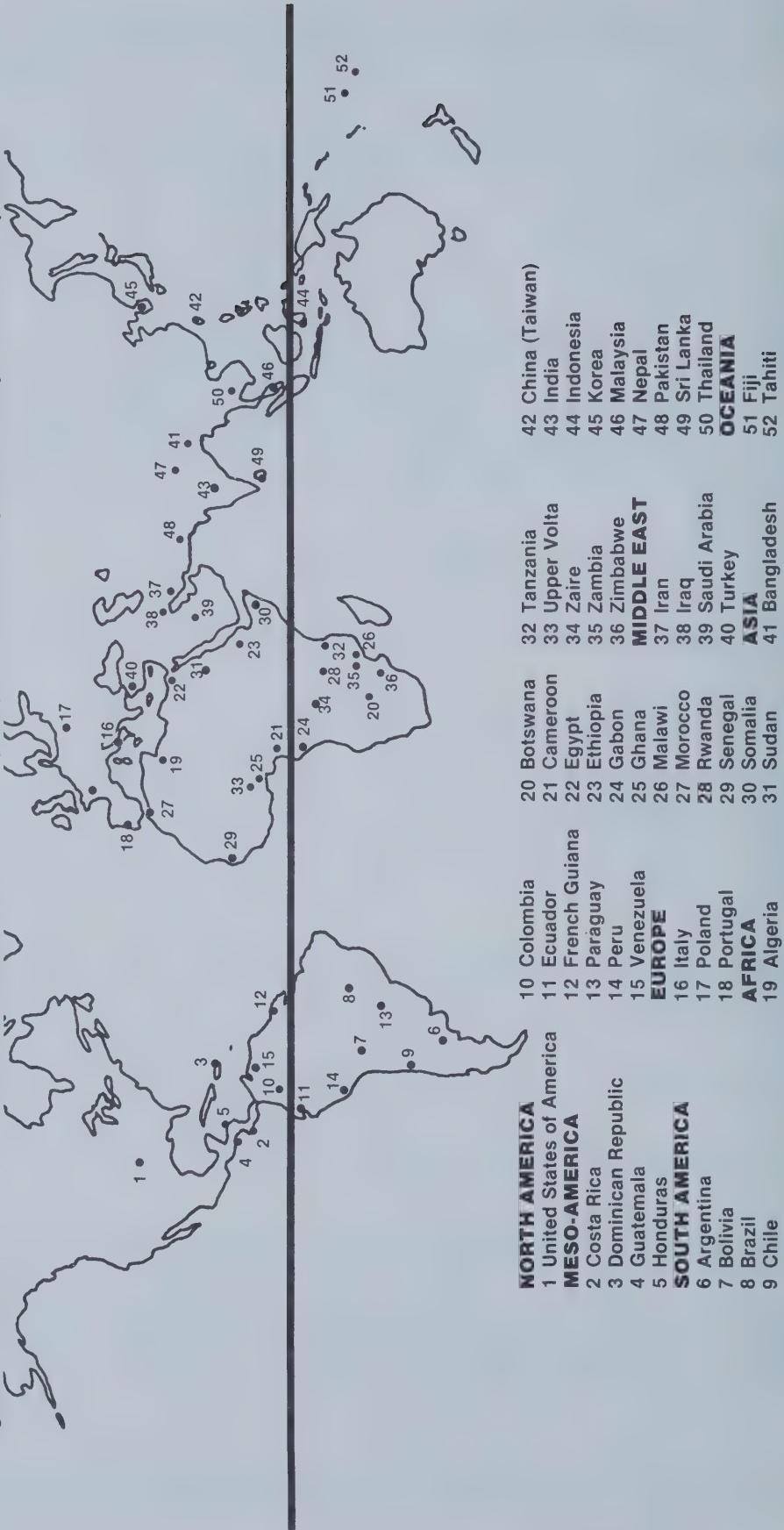
Lodging score: Estimated rating of lodged or down plants on a scale of 1 (all erect) to 5 (all down) as observed at time of maturity.

Shattering score: Estimated rating of the amount of shattering of seed from the pods on a scale of 1 (no seed shattered) to 5 (over 50% shattered) at the time of maturity.

Plants harvested: Total number of plants harvested.

Pods per plant: Mean number of pods per plant estimated from ten plants.

Figure 1. Countries from which data were Collected in the sixth (1978) International Soybean Variety Evaluation Experiment.



Seed weight: Weight in grams of 100 randomly selected seeds from the dried, cleaned grain.

Quality of seed: Estimated rating of seed quality after harvest considering the amount of wrinkling, defective seed coats, off-color seeds and moldy or rotten seed according to a scale of 1 (very good quality) to 5 (very poor quality).

Data were also compiled for protein and oil contents of harvested beans. These analyses were made from one seed sample of each cultivar which was composited across replications at each trial site by the cooperator who returned the sample to INTSOY for analysis. Protein and oil contents were determined on the dry weight basis by a near-infrared light reflectance instrument in the Department of Agronomy at the University of Illinois.

STATISTICAL ANALYSIS OF DATA

Analysis of variance was completed for variables for which data were complete at each site during the same season. Means, standard error of a cultivar mean, coefficient of variation, and the least significant difference (LSD) of cultivar means at the 5% level are reported for analyzable variables from each experiment site. Correlation coefficients were computed between agronomic characteristics.

Oil and protein analysis data are reported for each cultivar but no analysis of variance was performed.

A combined analysis was prepared for those environmental zones which contained at least four sites for which the coefficient of variation of yield was less than or equal to 30.0% (Tables 7 and 8). In the case of Environmental Zone X, two analyses are presented because there were two groups of cultivars.

RESULTS AND DISCUSSIONS - ISVEX SITES

Summary mean values for parameters observed in experiments during 1978 are presented for environmental zones in Tables 7 through 28. The data in these tables have been rearranged in Tables 29 through 34 to bring the data on several characteristics of each variety together so that it is easier to compare the performance of a variety with others. In Table 29 are given observed values usually at more than one location. Even with the observed values, it is difficult to make comparisons because the observed value is determined not only by the genotype of the cultivar but also by the environment. For example, the average yield level at the locations varied widely because conditions for growth were not the same. To partially remove the effect of environment, the mean of a group of varieties that were in several trials was calculated for each location. The "percent of the means" values were calculated as follows:

$$\frac{\text{Observed value}}{\text{Mean of check varieties}} \times 100 = \text{"percent of the mean".}$$

In Table 30 are given the "percent of the mean" values for the later maturing varieties based on the mean performance of Bossier, Improved Pelican and Williams. In Table 31 are given the "percent of the mean" values for the earlier maturing varieties based on the mean performance of Williams, Mitchell and Calland.

Yield

The range yield, 1320 kg/ha to 3035 kg/ha, indicated that soybean yields range from moderately low to relatively high when compared to those in the temperate zone. Within varieties there was a large variation in relative performance between zones. For a given location, variety recommendations should be based on the results of local trials.

Days to Flowering and Days to Maturity

The indicators of the development of a variety, the number of days from emergence to flowering and the number of days from emergence to maturity, are more stable than yield. In Tables 32 and 33 are given the data on flowering and maturity from 3 zones for each of 9 varieties. In Table 32 are given the data from the lower latitudes ($0-10^{\circ}59'$) and in Table 33 ($21^{\circ}-41^{\circ}-59'$) the number of days from flowering to maturity is given rather than from emergence to maturity because "days to flowering" is included in "days from emergence to maturity". Analysis of covariance of the data is shown in each table.

The period from planting until flowering and from flowering to maturity was significantly correlated in both early ($r=+.72$) and late ($r=+.63$) maturing varieties. The early flowering varieties tended to have a shorter period between flowering and maturity among the early maturing varieties ($r=+.987^{***}$) than among the late maturing varieties ($r=-.25^{ns}$). In Zone III flowering was delayed (56.3 days) due to high altitude ($<1000'$) but the period from flowering to maturity (63.3 days) was intermediate between the other two zones.

Plant Height

A classification of soybean varieties based on height can be made from the data presented in Tables 30 and 31. While the relative height of a variety varies from one zone to another, it does tend to be consistent.

Number of Pods Per Plant

Relative number of pods per plant (Tables 30 and 31) proved to be a rather stable characteristic for most varieties. Taller varieties tended to have more pods but within varieties there did not appear to be a relationship between height and number of pods.

Weight per Seed

Weight per 100 seed varied from 12 to 21 grams. There was considerable variation in the relative standings within a variety between zones but

such varieties as Improved Pelican, SJ-2, Orba, and Forrest can definitely be classified as small-seeded and Tunia, Jupiter, Williams and Cutler 71 can be classified as large-seeded.

Quality of Seed

The quality of seed produced in the trials was not good. On a scale of 1 to 5 (excellent to very poor) the very lowest rating was 1.6 for a variety-zone combination. Many varieties were rated over 3 at two or more locations. The small-seeded varieties tended to be rated lower --- in other words, they tended to have higher quality seeds.

Protein and oil

The percent protein and oil of the samples received are presented in Tables 25 and 34. The relative levels of several varieties in different zones are given in Table 34. Bossier, Improved Pelican and Williams are the check varieties. The range in both characteristics was not great. The lowest percent protein was 39.8 and the highest 46.4. The lowest percent oil was 16.5 and the highest 22.7. The relative levels shown in Table 34 show that Caribe was high in protein and low in oil, whereas, Ransom was low in protein and high in oil. Jupiter was somewhat low in both protein and oil. Soybeans produced in the trials generally were satisfactory from the standpoint of protein and oil.

SUMMARY

A large number of soybean cultivars with a diverse genetic composition were evaluated by cooperators under a wide range of environmental conditions in the Sixth International Soybean Variety Evaluation Experiment. Thirty-six cultivars from maturity groups 0-IX, including 16 different cultivars from previous ISVEX trials, were divided into early, medium and late maturing trials. The cultivars provided a source of the latest improved germplasm to 185 sites in 76 countries.

Table 1. Pedigree of soybean cultivars grown in the Sixth International Soybean Variety Evaluation Experiment (ISVEX) during 1978

Cultivar	Maturity Group	Pedigree
Altona	00	P.I. 194654 x Flambeau
Bossier	VII	Selection from Lee
Bragg	VII	Jackson x D49-2491
Calland	III	(Blackhawk x Harosoy) x Kent
Caribe	IX or later	Unknown, Colombia
CH-3	IX or later	Unknown
Cobb	VIII	F57-735 x D58-3358
Columbus	IV	C1069 x Clark
Corsoy	II	Harosoy x Capital
Crawford	IV	Williams x Columbus
Cutler 71	IV	Cutler x Kent
Davis	VI	[Roanoke x (Ogden x CNS)] x (Ralsoy x Ogden)
Elf	III	(Williams x Ransom)
Evans	0	Merit x Harosoy
Franklin	IV	L 12 x Custer
Forrest	V	Dyer x Bragg
Gasoy 17	VII	Bragg x Hood
Harcor	II	Corsoy x (Corsoy x Harosoy 63)
Hardee LS	VIII	D49-772 x Improved Pelican
Hodgson	I	Corsoy x M372
IAC-2	IX or later	La 49-1219 x Yelmand1
Improved Pelican	VIII	Tanloxi x P.I. 60406
James	IV	Delmar x Kent
Jupiter	IX	D49-2491 x P.I. 240664
Kahala	V	(Bunsei x UD 288) x Bunsei
Mitchell	IV	Privately developed variety
Orba		Unknown, Indonesia
Ransom	VII	(N55-5931 x N55-3818) x D56-1185
Rillito	VI	Clark x D49-2491
SJ-2	VII	Unknown
Steele	I	Blackhawk x Harosoy
Swift	0	[(Lincoln ² x Richland) x Korean] x (Renville x Capital)
Tunia	>IX	Colombia
UFV-1	>IX	D49-2491 x Improved Pelican Viçoja selection
Union	IV	Williams x S1 11
Williams	III	Wayne x L57-0034

Table 2: Distribution of cultivars in the Sixth ISVEX during 1978

Cultivars	Distribution by environmental zone		
	A I, II & IV	B III, V, VI, VII VIII, IX, & X	C XI, XII, & XIII
Altona	X		X
Bossier		X	
Bragg		X	
Calland	X	X	
Caribe	X		
CH-3	X		
Cobb		X	
Columbus			
Corsoy			X
Crawford			X
Cutler 71		X	X
Davis	X		
Elf			X
Evans		X	X
Franklin		X	
Forrest		X	
Gasoy 17		X	
Harcor			X
Hardee LS	X		
Hodgson		X	
IAC-2		X	
Improved Pelican			X
James			X
Jupiter		X	
Kahala		X	
Mitchell			X
Orba		X	
Ransom		X	
Rillito		X	
SJ-2		X	
Steele			X
Swift			X
Tunia		X	
UFV-1		X	
Union			X
Williams			

Table 3: List of soybean varieties in the Sixth International Soybean Variety Evaluation Experiment conducted during 1978

Code No.	A-Late Maturity (Tropical) I, II & IV	B-Medium Maturity (Sub-Tropical) III, V, VI, VII VIII, IX, X	C-Early Maturity (Temperate) XI, XII, XIII
01	CH-3		
02	UFV-1		
03	SJ-2		
04	Hardee LS		
05	Orba		
06	IAC-2		
07	Tunia		
08	Caribe		
09	Jupiter		
10	Improved Pelican	Improved Pelican	
11	Kahala	Kahala	
12	Rillito	Rillito	
13	Bossier	Bossier	
15	Ransom	Ransom	
19	Davis	Davis	
14	Williams	Williams	Williams
16		Cobb	
17		James	
18		Forrest	
20		Gasoy 17	
21		Calland	Calland
22		Franklin	Franklin
23		Cutler 71	Cutler 71
24		Mitchell	Mitchell
25		Bragg	
26			Altona
27			Swift
28			Steele
29			Harcor
30			Hodgson
31			Elf
32			Columbus
33			Union
34			Corsoy
35			Crawford
36			Evans

Table 4: Description of environmental zones in the Sixth International Soybean Variety Evaluation Experiment conducted during 1978

Zone	Latitude	Elevation (m)	Number of Sites
I	$<10^{\circ}59'$ ^{1/}	<500	21
II	$<10^{\circ}59'$	501-1,000	8
III	$<10^{\circ}59'$	$>1,000$ ^{2/}	9
IV	$11^{\circ}-20^{\circ}59'$	<500	10
V	$11^{\circ}-20^{\circ}59'$	501-1,000	4
VI	$11^{\circ}-20^{\circ}59'$	$>1,000$	7
VII	$21^{\circ}-30^{\circ}59'$	<500	13
VIII	$21^{\circ}-30^{\circ}59'$	501-1,000	5
IX	$21^{\circ}-30^{\circ}59'$	$>1,000$	1
X	$31^{\circ}-40^{\circ}59'$	<500	24
XI	$31^{\circ}-40^{\circ}59'$	501-1,000	3
XII	$31^{\circ}-40^{\circ}59'$	$>1,000$	2
XIII	$\geq 41^{\circ}$	≥ 0	

1/ < = less than

2/ > = greater than

Table 5: Geographical description of sites where the Sixth International Soybean Variety Evaluation Experiment was conducted and from which useful data were returned to INTSOY

Region	Country	Site	Latitude	Elevation (m)
Africa	Algeria	Ahmer-el-Ain	36°38'N	56
		Khemis-Miliana	36°15'N	296
	Botswana	Mahalapye	23° 7'S	1000
		Sebele	24°34'S	994
	Cameroon	Dschang	5°27'N	1450
		Foumbot	5°31'N	1100
	Egypt	Santchou	5° N	700
		Bahteem	30°28'N	24
	Ethiopia	Sakha	31° N	
		Seds	29° N	48
	Gabon	Shebin El-Kom	32° N	
		Awassa	6°25'N	1700
	Ghana	Debre-Zeit	9° N	1860
		Ntoum	0°20'N	
	Malawi	Kumasi	6°41'N	270
		Kumasi	6°42'N	270
	Morocco	Chitipa	9°46'S	1266
		Chitala	13°30'S	600
	Rwanda	Lilongwe	13°59'S	3725
		Berkane	34°56'N	145
	Senegal	Gharb	34°30'N	85
		Tadla	32° N	445
	Somalia	Karama	2°16'S	1350
		Rubona	2°29'S	1650
	Sudan	Centre IAO/OMOS	16°30'N	10
		Afgoi	2° 9'N	50
Asia	Tanzania	Abu-Naama	12°44'N	0
		Halima	7° N	450
	Upper Volta	Kadugli	11° N	
		Wad Medani	14°24'N	400
	Zaire	Morogoro	5°80'S	525
		Zanzibar	6° S	30
	Zambia	Vallee du Kou	11°40'N	450
		Kamina	7° S	1000
	Zimbabwe	Mwebe	5° S	550
		Lusaka	15°24'S	1154
	Bangladesh	Mufulira	12°38'S	1243
		Magoye	16° 1'S	1067
	Taiwan	Salisbury	17°48'S	1506
		Joydebpur	24° N	8
	India	Mymensingh	24° 7'N	18
		Shanhua	23° 7'N	9
		Hissar	29°10'N	215
		Bogor	6°30'S	270
		Medan	3°32'N	27
	Indonesia	Soropadan		500

Table 5 (Cont'd.): Geographical description of sites where the Sixth International Soybean Variety Evaluation Experiment was conducted and from which useful data were returned to INTSOY

Region	Country	Site	Latitude	Elevation (m)
Asia (cont'd.)	Korea	Suweon	37°17'N	37
	Malaysia	Sarawak	1°10'N	30
	Nepal	Birgunj	27° 2'N	100
	Pakistan	Kathmandu	27°40'N	1860
		Islamabad	33° N	550
		Lahore	31°30'N	230
		Lahore	31°30'N	230
		Lahore	31°19'N	225
		Tandojam	25° 2'N	19
Europe	Sri Lanka	Maha Illuppallama	8° N	138
	Thailand	Srisamrong	17°12'N	56
	Italy	Rome	42° 2'N	42
	Poland	Cagliari	39°25'N	89
		Radzikow	52°13'N	90
		Vinha Brava-Azores	38°41'N	160
		S. Miguel-Azores	37°45'N	80
		San Miguel-Azores	37°45'N	80
		Vinha Brava	38°40'N	160
Meso-America	Costa Rica	Taboga	10° N	8
	Dominican Republic	San Jose de Ocoa	18°40'N	1000
	Guatemala	Chimaltenango	14°39'N	1800
	Honduras	Garuma 2	15°22'N	36
	Iran	Gorgan	36°51'N	120
Middle East	Iraq	Sari	36°41'N	28
	Saudi Arabia	Abu-Ghraib	35° 3'N	30
		Rashida	36°19'N	223
		Unayzah, Gassim	26° 4'N	724
		Unayzah	26° 4'N	724
	Turkey	Adana	37°19'N	90
North America	United States of America	Urbana, Illinois	40° 7'N	226
	Fiji	Naiselesele	16°40'S	50
Oceania	Tahiti	Papara	17°30'S	2
South America	Argentina	Buenos Aires	34°35'S	255
	Bolivia	Cerro Azul	27°39'S	283
		Pergamino	34° S	65
		Abapo Izozog	18°39'S	389
		Santa Cruz	17°14'S	320
	Brazil	Yacuiba	21°57'S	600
		Cruz Alta	28°38'S	473
		Dourados	28°38'S	345
	Chile	Jaiba	14° 5'S	520
	Colombia	Santiago	33°42'S	654
		Santiago de Chile	33°34'S	625
		Cordoba	8°50'N	13
		Palmira	3°32'N	1080

Table 5 (Cont'd.) Geographical description of sites where the Sixth International Soybean Variety Evaluation Experiment was conducted and from which useful data were returned to INTSOY

Region	Country	Site	Latitude	Elevation (m)
South America	Ecuador	Boliche	2°15'S	14
(cont'd.)		Pallatanga	1°59'S	1270
		E. E. Portoviejo	1° 4'S	25
		Pichilingue	1° 6'S	73
French Guiana		Cayenne	4°54'N	7
Paraguay		Caacupe	25°24'S	228
Peru		E1 Porvenir	6°31'S	262
		E1 Porvenir	6°31'S	262
		Huancayo	11°54'S	650
		Huarangopampa-Bagua	5°40'S	500
		La Molina	12° 5'S	251
		Sullana	4°51'S	80
		Tingo Maria	9°45'S	610
		Tingo Maria	9°18'S	661
Venezuela		Barinas	8°37'N	180

Table 6: List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
AFRICA	Algeria	113, 115 Data	Mr. Tayeb Ferhat Benabbad	Station Regional I.D.C.I. Khemis-Miliana El-Asnam, ALGERIA
Botswana	174, 175 Data 171, 176 No Data	Dr. D. E. Gollifer G. S. Maphanyane	Agricultural Research Station P. O. Box 0033 Gaborone, BOTSWANA	
Burundi	1, 3, 5 No Data	Mr. J. Dewez	ISABU B. P. 795 Bujumbura, BURUNDI	
Cameroon	32, 33 Data 34	Mr. J. Praquin	IRAF B. P. 44 Dschang, CAMEROON	
Congo	69 No Data	Ing. Ivetic Obrad	Expert de la FAO B. P. 3, Lekana Brazzaville, CONGO	
Egypt	111 Data 112 No Data	Dr. M. N. Shatla	Professor of Plant Pathology Menoufia University Shebin El-Kom, EGYPT	
	105, 129 Data 126	Dr. Ali Abdel-Aziz and Dr. Samia Ali Mahmoud	Grain Legume Research Station Field Crops Research Institute Agricultural Research Center Giza, Cairo, EGYPT	
	109 No Data	Mr. M. Monir	Plant Production Department Desert Institute Mataria, Cairo, EGYPT	
Ethiopia	130 Data	Dr. Alemu Mengistu	Agricultural Experiment Station B. P. Box 32 Debre-Zeit, ETHIOPIA	

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
AFRICA (cont'd)	Ethiopia (cont'd)	117	Data	Mr. Gasahun Woldie AWASSA Research Station P. O. Box 6 Sidamo, ETHIOPIA
		130B, 117B	Data	Dr. Zmedu Waeku General Manager Agricultural Research Institute Ministry of Agriculture P. O. Box 2003 Addis Ababa, ETHIOPIA
Gabon	19	Data	Mr. J. Van Amerongen Mr. G. Van de Plassche	Project CLAM UNDP BP 2183 Libreville, GABON
	80	No Data	Mr. Yves Aracelin	UNDP Ecole Nationale de Cadres Ruraux Oyem, Woleu Ntem Province, GABON
Ghana	23	Data	Mr. Yaw Baafi Nimoh	Grains Development Board P. O. Box 4000 Kumasi, GHANA
	8	Data	Mr. Hector Mercer-Quarshie	Crops Research Institute P. O. Box 3785 Kumasi, GHANA
Ivory Coast	63, 55 60	No Data	Mr. A. D. Assa	Universite National de Cote d'Ivoire Faculte des Sciences B. P. 4322 Abidjan, IVORY COAST
Lesotho	183	No Data	Dr. E. T. Mahatanya	Head of Dryland Research Agricultural Research Station P. O. Box MS 24 Maseru 100, LESOTHO

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
AFRICA (cont'd)	Malagasy Republic	37	No Data	Mr. R. Rasolofo Directeur de la Division de Pathologie Vegetale B. P. 1444 - Ambatobe, Tananarive, MALAGASY REPUBLIC
Malawi	79, 152 163	Data	Mr. P. K. Sibale and Mr. D. J. Khonje	Chitedze Research Station P. O. Box 158 Lilongwe, MALAWI
Morocco	211 212	Data	Dr. Mohamed Abdouh Yacoubi and Mr. M. Aberouh	Institut Agronomique B. P. Box 704 Agdal-Rabat, MOROCCO
	216	Data	Dr. Driss Nadah	Agronomist, Office Regional de Mise En Valeur Agricole de Tadla Fquih Ben Salah, MOROCCO
Niger	67, 51	No Data	Mr. Sidibe Ousseini	Director, C.N.R.A. Tarna
Rwanda	161	Data	Mr. Ndamage Georges	Legume Program I.S.A.R. - Karama P. O. Box 240 Maradi, NIGER
	172	Data	Mr. Pierre Nyabyenda	I.S.A.R. - Rubona B. P. 138 Butare, RWANDA
	75, 78	No Data	Dr. Zeuner	Project Director Cooperation Technique Allemande B. P. 70 Nyabisindu, RWANDA

Table 6 (cont'd) : List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
AFRICA (cont'd)	Senegal	62	Data	Dr. Ing. Toader Moscal Project "Development de la cerealiculture" B. P. 256 Saint-Louis, SENEGAL
		57, 59	No Data	Mr. Ton That Trinh FAO-OMVS B. P. 154 Dakar, SENEGAL
Somalia	42	Data	Mr. Giumale Ossoble Salad and Mr. Faduma H. Mohamud	Central Agricultural Research Institute Ministry of Agriculture Mogadishu, SOMALIA
Sudan	49	Data	Mr. David Hopkinson	Agronomist, Soil and Crop Investigation Project P. O. Box 913 Khartoum, SUDAN
	12	Data	Dr. M. O. M. Salih and Dr. O. A. A. Ageeb	Agricultural Research Cooper- ation, Ministry of Agriculture P. O. Box 126 Wad Medani, SUDAN
	24	Data	Mr. Fathi Mohamad Khalifa	Abu-Naama Research Station Abu-Naama RNP SUDAN
	165	Data	Dr. Omer E. Simsaa	Agricultural Research Corp. Kadugli Research Station Kadugli, SUDAN
Tanzania	14	Data	Dr. K. W. May	P. O. Box 643 Morogoro, TANZANIA

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
AFRICA (cont'd)	Tanzania (cont'd)	14	Data	Mr. M. E. T. Mmbaga Agricultural Research and Training Institute Ilonga Private Bag Kilosa, TANZANIA
		2	Data	UNDP/FAO/JURT/73/024 Ministry of Agriculture and Land P. O. Box 159 Zanzibar, TANZANIA
Tunisia		106, 110	No Data	c/o Director of INRAT Route de la Soukra Ariana, TUNISIA
Uganda		6	No Data	Department of Crop Science Makerere University P. O. Box 7062 Kampala, UGANDA
Upper Volta		64	Data	Mr. C. Poisson C.E.R.C.I. UPV/75/035 B. P. 130 Bobo-Dioulasso, UPPER VOLTA
Zaire		157	Data	64 C.E.R.C.I. Farako-BA B. P. 540 Bobo-Dioulasso, UPPER VOLTA
				Mission Methodiste B. P. 10 Kabongo, Shaba, ZAIRE

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
AFRICA (cont'd)	Zaire (cont'd)	18	Data Mr. Thomas G. Hart	CIMMYT Team Leader Programme National Mais Station de Kisanga B. P. 3673 Lubumbashi, ZAIRE
		68	No Data	SEDA Service Du Developpement Agricole B. P. 1 Tshikapa, ZAIRE
Zambia	180, 181	Data 182	Mr. F. Javaheri, Mr. G. Melhuish and Dr. C. Nissly	Copperbelt Research Station P. O. Box 11 Magoye, ZAMBIA
Zimbabwe	178	Data	Dr. J. R. Tattersfield and Mr. J. S. Tichagwa	Crop Breeding Institute P. B. Box 8100 Causeway Salisbury, ZIMBABWE
ASIA	Afghanistan	131, 132	No Data Mr. Arif Noory	President of Research Ministry of Agriculture Kabul, AFGHANISTAN
	Bangladesh	150	Data Mr. A. Sobhan and Mr. M. Z. Hoque	c/o IRRI P. O. Box 64 Ramma, Dacca-2, BANGLADESH
		141	Data	Dr. A. J. Miah, Mr. Jafax Ahmed, Mr. B. H. Sikder INA Mymensingh, BANGLADESH

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
ASIA (cont'd)	Bangladesh (cont'd)	162	No Data Mr. Peter R. Hobbs	IRRI Bungalow No. 4 Farmgate, Telyoon Dacca, BANGLADESH
	Burma	144	No Data Dr. Myint Thein	General Manager Applied Research Division Agricultural Cooperation Rangoon, BURMA
	Taiwan	170	Data Dr. S. Shanmugasundaram	Soybean Coordinator The Asian Vegetable Research and Development Center P. O. Box 42, Shanhua, Tainan, 741 TAIWAN
	India	136	Data Dr. B. D. Chaudhary	Department of Plant Breeding Haryana Agricultural University Hissar . 125 004 INDIA
		48	No Data Mr. T. K. Venkataraman	Agricultural Experimental Institute Kudumiamalai Vayalogam Post 622104 Pudukkottai Dist. Tamilnadu, INDIA
		140	No Data Mr. M. D. Tedia	c/o Director of Agriculture Directorate of Agriculture Bhopal, Madhya Pradesh, INDIA
Indonesia	20	Data	Ir. Soenjoto Djojodirdjo	Department of Agronomy University of Gadjah Mada Yogyakarta, INDONESIA

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
ASIA (cont'd)	Indonesia (cont'd)	36	Ir. Baringin O. P. Tampubolon	Department Agronomy Fakultas Pertanian USU Medan, INDONESIA
		7	Mr. A. Dimyati and Mr. Darman M. Arsyad	Central Research Institute for Agriculture Jalan Merdeka 99 Bogor, INDONESIA
	Korea	209	Data	Crop Experiment Station Suweon 170, KOREA
	Malaysia	25	Data	Agricultural Research Center Semongok P. O. Box 977, Kuching Sarawak, MALAYSIA
		53	No Data	Dr. Chew Soo Ton Korporasi Pembangunan Desa SEDCO Complex Block D, Lot 14 Kota Kinabalu, Sabah, MALAYSIA
	Nepal	139	Data	Parwanipur Agr. Station Birgunj, NEPAL
		138	Data	Department of Agriculture Khumaltare, GPO 404 Kathmandu, NEPAL
		135, 145	No Data	Gandaki Agricultural Development Project P. O. Box Z Pokhara, NEPAL

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
ASIA (cont'd)	Pakistan	118	Data Mr. A. H. Chaudhry, Mr. M. A. Jaleel and Mr. N. Ahmeel	Agricultural Research Institute Tandojam, PAKISTAN
		142	Data Dr. Abdur Rahman Khan	Coordinator (Oilseed) Al -Markaz F - 7/2 Pakistan Agri. Res. Council Islamabad, PAKISTAN
		143, 147	No Data Dr. Baz Mohammad Khan	Agricultural Research Council P. O. Box 1031 Islamabad, PAKISTAN
		146, 201, 217	Data Mr. J. R. Lockman and Mr. Robert Troedson	Technical Services Assoc. Agricultural Project 23-2 Race Course Road Lahore 3, PAKISTAN
		114B	No Data Mr. S. Bodshah	Agricultural Research Institute Tarnab, N. W.F.P. PAKISTAN
Philippines	44	No Data	Mr. F. B. Ballon	B. P. I. San Andres, Manila, PHILIPPINES
	76	No Data	Mr. C. Bartolome	Institute of Plant Breeding Legume Division U. P. at Los Banos College, Laguna 3720, PHILIPPINES
	41	No Data	Mr. Benjamin Legaspi	BPI Economic Gardens Los Banos, Laguna, PHILIPPINES

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
ASIA (cont'd)	Sri Lanka	173, 311	Data Dr. H. E. Herath	Sri Lanka Soybean Project Central Agricultural Research Institute Peradeniya, Gannoruwa, SRI LANKA
	Thailand	43	Data Dr. Arwooth NaLampang	Dept. of Agriculture Bangkhen, Bangkok 9 THAILAND
	Vietnam	--	No Data Dr. Vo-Tong Xuan	University of Cantho Cantho, Hau-Giang SOCIALIST REPUBLIC OF VIETNAM
EUROPE	Czechoslo- vakia	206	No Data Ing. Teodor Simsky	Vyskumnny Ustav Rastlinnej Vyroby Bratislavská Cesta 2696 921 68 Piestany, CZECHOSLOVAKIA
	France	207, 210	No Data Mr. Claude Planchon	Laboratoire d'Amelioration des Plantes Ecole Nationale Supérieure Agron- omique 31076 Toulouse - Cedex FRANCE
	Italy	203	Data Mr. Mauro Deidda	CRAS Via Alberti, 22 09100 Cagliari, Sardinia, ITALY

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
EUROPE (cont'd)	Italy (cont'd)	204	Data	Mr. G. Porreca
				Comitato Nazionale Per L'Energia Nucleare Casella Postale 24000 00100 Rome, ITALY
	Netherlands	249	No Data	Unilever Research Agricultural Dept. P. O. Box 7 Zevenaar, HOLLAND
	Poland	250	Data	Soybean Laboratory Plant Breeding and Acclimatization Institute Radzikow, 05-870 Blonie, POLAND
	Portugal	202	No Data	Mr. Abilio Dos Santos O. Silva
				Instituto Nacional De Investigacao Agraria Rua Das Janelas Verdes - 92 Lisbon, PORTUGAL
		103, 104, 101	Data	Mr. J. Hermano do Brum Sousa Dourado
		102	Data	Mr. L. Tadeu S. Dutra
				Servicos Agricolas de S. Miguel Quinta de S. Goncalo 9500 Ponta Delgada Azores, PORTUGAL
				Servicos Agricolas da Ilha Terceira, Vila Brava Angra, 9700 Codex, PORTUGAL

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
MESO-AMERICA	Costa Rica	52	Data Mr. Rodriguez Alfaro M. Mr. Adrian Morales G.	Min. Agric. Ganaderia Apdo Postal 3718 San Jose, COSTA RICA
Dominican Republic	29	Data	Mr. C. Schwitzke	c/o Embajada Alemana AP 1235 Santo Domingo, DOMINICAN REPUBLIC
Guatemala	119	Data	Mr. Darryl Jordan	PLENTY c/o Canadian Embassy Edificio Maya Guatemala City, GUATEMALA
Honduras	72	Data	Mr. Julio Romero	SIATSA Division of Tropical Research La Lima, HONDURAS
	50, 59	No Data	Dr. Franklin E. Rosales	Programa Nacional de Investigacion Agropecuaria Secretaria de Recursos Naturales Tegucigalpa D. C., HONDURAS
St. Vincent	71, 73, 81, 82, 169	No Data	Mr. Jethro Greene	Organization for Rural Development P. O. Box 933, Kingstown, St. Vincent, WEST INDIES
Virgin Islands	54	No Data	Dr. A. John Conje	Virgin Islands Agricultural Experiment P. O. Box 920, Kingshill, St. Croix, VIRGIN ISLANDS 00850
MID-EAST	Iran	123, 127	Data	c/o H. Pourdavai Seed and Plant Improvement Institute Karaj, IRAN

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
MID-EAST (cont'd)	Iran (cont'd)	107	No Data Mr. M. C. Amirshahi	College of Agriculture Karaj, IRAN
		205	No Data Dr. J. Carapetian	University of Rezaiyeh P. O. Box 32 Rezaiyeh, IRAN
Iraq	133, 134	Data No Data	Mr. Ridha S. Marouf and Mr. S. D. Sulaman	Oilseed Section Nineva Research Station Dept. of Field Crop Abu-Sharaib, Baghdad, IRAQ
		116	Data Dr. N. M. Elsahookie	Dept. of Field Crops College of Agriculture Abu-Ghraib, IRAQ
Israel	208	No Data	Dr. Baruch Retig	The Volcani Center P. O. Box 6 Bet Dagan, ISRAEL
Jordan	120, 122	No Data	Mr. Z. S. Ghoseh	Director of Agronomy Division Agr. Res. and Ext. Dept. P. O. Box 226 Amman, JORDAN
Saudi Arabia	124	Data	Manager	CATM P. O. Box 81 Uhayzah, Gassim, SAUDI ARABIA

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
MID-EAST (cont'd)	Saudi Arabia (cont'd)	159	Data Mr. M. Z. Jowana	Director, Crop Production Div. Dept. of Agric. Res. and Dev. Ministry of Agr. and Water Riyadh, SAUDI ARABIA
	Syria	164	No Data Eng. Abdul Razzaq Al-Hassan	Diraa, Ar-Raqqqa, SYRIA
		173	No Data Eng. Ahmad Kabalan	Minister of Agr. and Agr. Reform Damascus, SYRIA
		121	No Data Mr. G. C. Hawtin	Food Legume Improvement Program ICARDA Box 5466 Aleppo, SYRIA
		125, 128	No Data Mr. Mohamed Sadek El Matt	Institute of Agricultural Research Douma, Damascus, SYRIA
	Turkey	218	Data Dr. Ibrahim Atakisi and Mr. H. Halis Arioglu	C. U. Ziraat Fakultesi Tarla Bitkileri Yetist Irme Ve Islahi Bolumu, Adana, TURKEY
		219	No Data Mr. Ken Dolezal	CARE PK 6 Yenisehir, Ankara, TURKEY
NORTH AMERICA	U. S. A.	14	Data	INTSOY, Dept. of Agronomy, University of Illinois 1102 South Goodwin Avenue Urbana, Illinois 61801, U. S. A.

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
OCEANIA	Fiji	99	Data Mr. R. Viner and Mr. M. Prasad	Legalega Research Station P. O. Box 9086 Nadi Airport, FIJI
	New Caledonia	77	No Data Mr. Robert Arrighi	C.R.E.A. B. P. 37 Bourail, NEW CALEDONIA
	Tahiti	11	Data Mr. Jean-Louis Reboul and Mr. Robert Yau	B. P. 494 Papeete, TAHITI
	Tonga	179	No Data Mr. Haniteli Ofa Faamunu	Research Director, Research Division, Ministry of Agriculture Box 14 Nukualofa, TONGA
SOUTH AMERICA	Argentina	225	Data Ms. Nora Mancuso	Instituto Nacional de Tecnología Agropecaria Rivadavia 1439 1033 Capital Federal Buenos Aires, ARGENTINA
		220	Data Ing. Carlos Remussi	Catedra de Cultivos Industriales Facultad de Agronomía Universidad de Buenos Aires Avda. San Martín 4453 Buenos Aires, ARGENTINA

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
SOUTH AMERICA (cont'd)	Argentina (cont'd)	162	Data Mr. Wilhelm Reupke	Instituto Nacional de Tecnología Agropecuaria Av. Corrientes 320, Casilla de Cor. 152, 330 Posadas Misiones, ARGENTINA
		226	No Data Ing. Agr. Nestor Padules	CC No. 21-2580 Marcos Juarez (CBA) ARGENTINA
Bolivia		155	Data Mr. Juan Bellott Montalvo	Proyecto Abapo-Izozog Est Exp. "Armando Gomez" Cajon Postal 1281 Santa Cruz do la Sierra, BOLIVIA
		153	Data Mr. R. Delgadillo	Estacion Experimental "Gran Chaco" Casilla #49 Yacuiba, Tarija, BOLIVIA
		167	Data Ing. Hebert Zurita O., Mr. D. K. Kidman, and Mr. A. Tejerina	Enc. Loeaginosas y Fibrotextiles Estacion Experimental Casilla 247 Santa Cruz, BOLIVIA
Brazil		154	No Data Mr. Carmine Rosita and Mr. L. P. Bonetti	Fecotrig Research Dept. Caixa Postal 10 Cruz Alta - RS BRAZIL

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
SOUTH AMERICA (cont'd)	Brazil (cont'd)	61	Data	Mr. Jack Schultz and Mr. R. Richardson
		108	Data	Mr. Chris Suebert and Mr. Mervyn Olson
	Chile	221	Data	Dr. P. C. Parodi and Ms. I. M. Nebreda
		224	Data	Mr. Vital Valdivia B.
Colombia	16, 17 15	Data No Data	Dr. Gilberto Bastidas R. Mr. R. Varela Mr. L. A. Roja M. Mr. M. A. Munoz	ICA Centro Experimental Palmira Apartado Aereo 233 Palmira, Valle, COLOMBIA
Ecuador	94, 21, 39, 38	Data	Mr. E. Maldonado	INIAP Apartado. No. 7069 Guayaquil, ECUADOR
French Guiana	31	Data	Mr. R. Vanbercie	IRAT Station de Cabassou B. P. 60, Cayenne, 97301 FRENCH GUIANA

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
SOUTH AMERICA (cont'd)	Guyana	35	No Data	Mr. Herman Adams Central Agricultural Station Ministry of Agriculture Mon Repos, East Coast, Demerara, GUYANA
	Paraguay	158	Data	Ing. Roberto Casaccia, Mr. Oscar Aguilera, and c/o Ministerio de Agricultura y Ganaderia Instituto Agronomico Nacional Caacupe, PARAGUAY
	Peru	40, 148, 149, 47, 46, 213	Data	Dr. Luis Camacho, Ing. M. Guerreo Renteria, Mr. T. R. Perez Lazo, Mr. Jose Bruno A., Ing. Pedro L. Cubillas, Ing. Ubaldo C. A. Maceda, Mr. Eduardo S. Vilcapoma, Mr. Ramon Rios R.
		215	Data	Mr. Carlos Alberto Loayza Estacion Experimental -Huancayo Calle Real # 507 El Tambo, Huancayo, PERU
		10, 70	Data	Ing. Armando Cuevas- Benavides, Ing. Dairo Maldonado, Mr. Luis Lopez Experimental Station "El Porvenir" Apartado 9 Tarapoto, PERU
	Surinam	45	No Data	Mr. E. Rellum-Venhuert Agricultural Experiment Station P. O. Box 160 Paramaribo, SURINAM
	Venezuela	4	Data	Dr. Luis Mariano C. and Mr. Roberto Niño Edificio Cavendis Av. Francisco de Miranda Apartado 224 Caracas, VENEZUELA

Table 7: Yield of soybean grain in kilograms per hectare observed in the Sixth ISVEX conducted in similar environmental zones (I, II, III and IV)

Cultivar	Mean grain yield (kg/ha)			
	13 sites	6 sites	5 sites	6 sites
	Zone I 0-10° lat. 0-500m	Zone II 0-10° lat. 501-1000m	Zone III 0-10° lat. >1000m	Zone IV 11-20° lat. 0-500m
Tunia	2109 (1) ^{1/}			2573 (1)
Jupiter	2032 (2)		2585 (3)	2210 (5)
Hardee LS	2025 (3)		2884 (1)	2219 (4)
UFV-1	1997 (4)		2275 (7)	2223 (3)
Rillito	1975 (5)	1320 (5)		
Bossier	1961 (6)	1641 (2)	2225 (9)	2526 (2)
Imp. Pelican	1860 (7)	1723 (1)	2620 (2)	2179 (6)
Williams	1853 (8)	1588 (3)	1946 (10)	2024 (8)
SJ-2	1849 (9)		2497 (4)	1778 (11)
IAC-2	1836 (10)		2252 (8)	2052 (7)
CH-3	1812 (11)		2356 (5)	
Caribe	1755 (12)			1825 (10)
Orba	1671 (13)	1506 (4)	2287 (6)	1996 (9)
Cobb	<u>2/</u>			
Mean	1903	1556	2393	2146
LSD (0.05)	-NS- ^{3/}	-NS-	-NS-	-NS-

^{1/} Numbers in parentheses indicate ranking of mean yields

^{2/} Cultivar omitted at some sites, therefore, mean values not calculated

^{3/} Differences not significant at 5% level

Table 8: Yield of soybean grain in kilograms per hectare of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (VI, VII, X Group A and X Group B)

Cultivars	Mean grain yield (kg/ha)				
	5 sites Zone VI 11-20° lat. >1000m	8 sites Zone VII 21-30° lat. 0-500m	6 sites Zone X Group A 31-40° lat. 0-500m	7 sites Zone X Group B 31-40° lat. 0-500m	
	Forrest	3035 (1) ^{1/}	1504 (12)	2140 (8)	
	Davis	2935 (2)	2119 (3)	2093 (9)	
Bossier	2798 (3)	1982 (6)	2141 (7)		
Ransom	2791 (4)	2151 (2)	2357 (3)		
Gasoy 17	2683 (5)	2015 (5)			
Mitchell	2617 (6)	1831 (7)	2623 (1)	2314 (6)	
Crawford	2593			2283 (8)	
James	2470 (8)				
Cutler 71	2433 (9)	1579 (9)	2147 (6)		
Calland	2262 (10)	1661 (8)	2513 (2)	2404 (2)	
Williams	2158 (11)	1560 (11)	2321 (4)	2292 (7)	
Imp. Pelican	2124 (12)	2058 (4)			
Franklin	2010 (13)	1567 (10)	2269 (5)	2360 (4)	
Rillito	<u>2/</u>	2474 (1)	1888 (10)		
Elf				2480 (1)	
Columbus				2363 (3)	
Union				2322 (5)	
Harcor				2168 (9)	
Hodgson				2033 (10)	
Evans				2027 (11)	
Steele				1804 (12)	
Swift				1589 (13)	
Altona				1324 (14)	
Mean	2531	1875	2249	2126	
LSD (0.05)	405	497	-NS- ^{3/}	535	

^{1/} Numbers in parentheses indicate ranking of mean yields

^{2/} Cultivar omitted at some sites, therefore, mean values not calculated

^{3/} Differences not significant at 5% level

Table 9: Days from emergence to first flowering of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (I, II, III and IV)

Cultivar	Mean days to flower			
	13 sites	6 sites	5 sites	6 sites
	Zone I 0-10° lat. 0-500m	Zone II 0-10° lat. 501-1000m	Zone III 0-10° lat. >1000m	Zone IV 11-20° lat. 0-500m
Tunia	32			39
Jupiter	42		65	46
Hardee LS	40		65	48
UFV-1	35		54	41
Rillito	30	38		
Bossier	35	42	53	38
Imp. Pelican	35	42	57	40
Williams	29	37	44	31
SJ-2	36		56	43
IAC-2	35		54	43
CH-3	35		54	
Caribe	36			43
Orba	34		59	41
Cobb		38		
Mean	35	40	56	41
LSD (0.05)	1.9	1.6	5.8	4.9

Table 10: Days from emergence to maturity of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (I, II, III and IV)

Cultivar	Mean days to maturity			
	12 sites	6 sites	5 sites	6 sites
	Zone I 0-10° lat. 0-500m	Zone II 0-10° lat. 501-1000m	Zone III 0-10° lat. >1000m	Zone IV 11-20° lat. 0-500m
Tunia	105			106
Jupiter	109		133	111
Hardee LS	114		133	111
UFV-1	103		122	104
Rillito	93	92		
Bossier	100	101	110	94
Imp. Pelican	99	96	118	100
Williams	90	92	101	89
SJ-2	104		122	97
IAC-2	106		123	106
CH-3	109		127	
Caribe	117			115
Orba	95		115	95
Cobb		102		
Mean	103	97	120	103
LSD (0.05)	5.4	4.4	6.5	10.3

Table 11: Height in centimeters of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (I, II, III and IV)

Cultivar	Mean plant height (cm)			
	13 sites	6 sites	5 sites	6 sites
	Zone I 0-10° lat. 0-500m	Zone II 0-10° lat. 501-1000m	Zone III 0-10° lat. >1000m	Zone IV 11-20° lat. 0-500m
Tunia	53			58
Jupiter	61		72	61
Hardee LS	54		60	51
UFV-1	36		35	37
Rillito	48	42		
Bossier	50	49	43	47
Imp. Pelican	66	53	61	67
Williams	46	43	35	41
SJ-2	62		62	58
IAC-2	64		63	70
CH-3	74		76	
Caribe	73			72
Orba	60		68	68
Cobb		37		
Mean	58	45	58	57
LSD (0.05)	6.4	8.9	8.9	10.8

Table 12: Amount of lodging of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (I, II, III and IV)

Cultivar	Mean lodging score 1/			
	13 sites	5 sites	3 sites	6 sites
	Zone I 0-10° lat. 0-500m	Zone II 0-10° lat. 501-1000m	Zone III 0-10° lat. >1000m	Zone IV 11-20° lat. 0-500m
Tunia	1.4			1.3
Jupiter	1.9		2.3	1.6
Hardee LS	1.4		2.2	1.3
UFV-1	1.0		1.1	1.1
Rillito	1.5	1.3		
Bossier	1.4	1.4	1.7	1.7
Imp. Pelican	1.8	1.4	1.9	2.0
Williams	1.3	1.4	1.3	1.3
SJ-2	2.0		2.6	1.3
IAC-2	1.7		2.6	2.4
CH-3	2.1		2.8	
Caribe	2.0			2.3
Orba	2.3		3.0	2.3
Cobb		1.3		
Mean	1.7	1.4	2.2	1.7
LSD (0.05)	.49	-NS-	-NS-	.81

1/

Mean of lodging scores where:

1 = all plants erect

2 = all leaning slightly or a few down

3 = all leaning moderately (45°) or 25-30% down

4 = all leaning considerably or 50-80% down

5 = all plants down

Table 13: Amount of shattered pods of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (I, II, III and IV)

Cultivars	Mean shattering score <u>1/</u>			
	13 sites	5 sites	3 sites	6 sites
	Zone I 0-10° lat. 0-500m	Zone II 0-10° lat. 501-1000m	Zone III 0-10° lat. >1000m	Zone IV 11-20° lat. 0-500m
Tunia	1.2			1.5
Jupiter	1.0		1.0	1.1
Hardee LS	1.1		1.0	1.1
UFV-1	1.2		1.0	1.1
Rillito	1.0	1.3		
Bossier	1.0	1.3	1.0	1.2
Imp. Pelican	1.1	1.3	1.0	1.5
Williams	1.0	1.5	1.0	1.4
SJ-2	1.5		1.0	1.4
IAC-2	1.2		1.0	1.3
CH-3	1.2		1.0	
Caribe	1.5			1.0
Orba	2.1		2.2	1.9
Cobb		1.5		
Mean	1.2	1.4	1.1	1.3
LSD (0.05)	.41	-NS-	-NS-	.46

1/ Mean of shattering scores where:

- 1 = no shattered pods
- 2 = 1-10% shattered pods
- 3 = 10-25% shattered pods
- 4 = 25-50% shattered pods
- 5 = over 50% shattered pods

Table 14: Number of pods per plant of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (I, II, III and IV)

Cultivar	Mean number of pods per plant			
	13 sites Zone I 0-10° lat. 0-500m	6 sites Zone II 0-10° lat. 501-1000m	5 sites Zone III 0-10° lat. >1000m	6 sites Zone IV 11-20° lat. 0-500m
Tunia	36			45
Jupiter	36		32	47
Hardee LS	48		43	53
UFV-1	28		32	39
Rillito	36	19		
Bossier	30	17	25	39
Imp. Pelican	33	21	32	41
Williams	22	15	18	28
SJ-2	40		36	66
IAC-2	37		31	53
CH-3	36		34	
Caribe	46			58
Orba	34		31	44
Cobb		15		
Mean	36	18	31	47
LSD (0.05)	7.4	4.2	7.6	17.9

Table 15: Weight of 100 seeds in grams of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (I, II, III and IV)

Cultivar	Mean seed weight (g/100 seeds)			
	13 sites Zone I 0-10° lat. 0-500m	6 sites Zone II 0-10° lat. 501-1000m	4 sites Zone III 0-10° lat. >1000m	5 sites Zone IV 11-20° lat. 0-500m
Tunia	19			17
Jupiter	19		20	15
Hardee LS	17		17	14
UFV-1	17		19	15
Rillito	16	16		
Bossier	17	16	16	16
Imp. Pelican	15	14	16	13
Williams	19	20	21	17
SJ-2	15		14	13
IAC-2	17		19	15
CH-3	16		15	
Caribe	14			12
Orba	14		15	13
Cobb		18		
Mean	16	17	17	14
LSD (0.05)	1.4	1.3	3.3	1.8

Table 16: Quality of harvested seed of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (I, II, III and IV)

Cultivars	Mean seed quality score 1/			
	12 sites Zone I 0-10° lat. 0-500m	6 sites Zone II 0-10° lat. 501-1000m	4 sites Zone III 0-10° lat. >1000m	4 sites Zone IV 11-20° lat. 0-500m
Tunia	2.7			2.3
Jupiter	2.6		2.9	1.9
Hardee LS	2.4		2.0	2.2
UFV-1	2.4		2.2	1.9
Rillito	2.3	2.8		
Bossier	2.5	2.4	2.1	1.8
Imp. Pelican	2.1	2.0	1.6	1.9
Williams	2.1	2.4	2.3	2.0
SJ-2	2.1		1.9	2.3
IAC-2	2.3		2.5	1.9
CH-3	2.6		2.4	
Caribe	2.8			2.0
Orba	2.2		2.1	1.9
Cobb		2.6		
Mean	2.4	2.4	2.2	2.0
LSD (0.05)	.44	-NS-	-NS-	-NS-

1/ Mean of seed quality scores where:

- 1 = very good
- 2 = good
- 3 = fair
- 4 = poor
- 5 = very poor

Table 17: Days from emergence to first flowering of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (VI, VII, X Group A, X Group B)

Cultivar	Mean days to flower			
	5 sites Zone VI 11-20° lat. >1000m	8 sites Zone VII 21-30° lat. 0-500m	6 sites Zone X Group A 31-40° lat. 0-500m	6 sites Zone X Group B 31-40° lat. 0-500m
Forrest	37	45	66	
Davis	43	51	77	
Bossier	45	50	80	
Ransom	34	44	74	
Gasoy 17	33	47		
Mitchell	29	32	49	39
Crawford	30			31
James	31			
Cutler 71	30	31	41	
Calland	28	29	40	36
Williams	28	30	42	37
Imp. Pelican	51	68		
Franklin	28	30	40	39
Rillito		46	76	
Elf				38
Columbus				40
Union				38
Harcor				33
Hodgson				32
Evans				38
Steele				30
Swift				30
Altona				28
Mean	34	42	58	35
LSD (0.05)	5.1	8.4	7.9	4.0

Table 18: Days from emergence to maturity of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (VI, VII, X Group A and X Group B)

Cultivars	Mean days to maturity			
	4 sites Zone VI 11-20° lat. >1000m	8 sites Zone VII 21-30° lat. 0-500m	6 sites Zone X Group A 31-40° lat. 0-500m	6 sites Zone X Group B 31-40° lat. 0-500m
Forrest	108	123	156	
Davis	112	131	176	
Bossier	115	139	180	
Ransom	105	132	179	
Gasoy 17	102	135		
Mitchell	96	106	142	115
Crawford	98			90
James	100			
Cutler 71	96	101	138	
Calland	100	102	134	107
Williams	93	101	143	104
Imp. Pelican	120	139		
Franklin	93	102	132	115
Rillito		128	174	
Elf				108
Columbus				120
Union				110
Harcor				95
Hodgson				87
Evans				107
Steele				86
Swift				86
Altona				76
Mean	103	120	155	101
LSD (0.05)	8.9	11.3	15.4	11.7

Table 19: Height in centimeters of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (VI, VII, X GROUP A and X Group B)

Cultivar	Mean plant height (cm)			
	5 sites Zone VI 11-20° lat. >1000m	8 sites Zone VII 21-30° lat. 0-500m	5 sites Zone X Group A 31-40° lat. 0-500m	7 sites Zone X Group B 31-40° lat. 0-500m
	Forrest	53	51	94
	Davis	55	60	104
Bossier	60	69	105	
Ransom	38	50	98	
Gasoy 17	38	58		
Mitchell	49	58	94	76
Crawford	50			61
James	47			
Cutler 71	49	53	93	
Calland	43	55	95	76
Williams	39	50	84	67
Imp. Pelican	82	109		
Franklin	42	54	95	77
Rillito		80	113	
Elf				45
Columbus				79
Union				77
Harcor				64
Hodgson				57
Evans				70
Steele				59
Swift				57
Altona				51
Mean	49	62	98	65
LSD (0.05)	13.4	11.8	14.4	9.6

Table 20: Amount of lodging of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (VI, VII, X Group A, X Group B)

Cultivars	Mean lodging score ^{1/}			
	4 sites Zone VI 11-20° >1000m	8 sites Zone VII 21-30° lat. 0-500m	4 sites Zone X Group A 31-40° lat. 0-500m	5 sites Zone X Group B 31-40° lat. 0-500m
Forrest	1.4	1.1	1.9	
Davis	1.5	1.3	2.0	
Bossier	2.6	1.5	2.8	
Ransom	1.1	1.1	2.3	
Gasoy 17	1.1	1.3		
Mitchell	1.3	1.2	2.0	1.6
Crawford	1.1			1.5
James	1.3			
Cutler 71	1.1	1.2	2.1	
Calland	1.3	1.1	1.9	1.5
Williams	1.0	1.1	1.2	1.4
Imp. Pelican	2.7	2.4		
Franklin	1.0	1.1	1.8	1.5
Rillito		1.7	2.7	
Elf				1.0
Columbus				1.6
Union				1.4
Harcor				1.7
Hodgson				1.6
Evans				1.6
Steele				1.6
Swift				1.8
Altona				1.8
Mean	1.4	1.3	2.1	1.5
LSD (0.05)	.96	.48	-NS-	-NS-

1/ Mean of lodging scores where:

- 1 = all plants erect
- 2 = all leaning slightly or a few down
- 3 = all leaning moderately (45°) or 25-30% down
- 4 = all leaning considerably or 50-80% down
- 5 = all plants down

Table 21: Amount of shattered pods of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (VI, VII, X Group A, X Group B)

Cultivars	Mean shattering score ^{1/}			
	2 sites Zone VI 11-20° lat. >1000 m	7 sites Zone VII 21-30° lat. 0-500m	4 sites Zone X Group A 31-40° lat. 0-500m	5 sites Zone X Group B 31-40° lat. 0-500m
Forrest	1.0	1.0	1.3	
Davis	1.1	1.2	1.4	
Bossier	1.1	1.3	1.6	
Ransom	1.0	1.0	1.4	
Gasoy 17	1.1	1.1		
Mitchell	1.0	1.2	1.4	1.5
Crawford	1.0			1.3
James	1.3			
Cutler 71	1.0	1.2	1.4	
Calland	1.4	1.2	1.6	1.3
Williams	1.0	1.3	1.3	1.2
Imp. Pelican	1.5	1.3		
Franklin	1.0	1.2	1.6	1.3
Rillito		1.0	1.4	
Elf				1.4
Columbus				1.2
Union				1.2
Harcor				1.5
Hodgson				1.4
Evans				1.4
Steele				1.4
Swift				1.7
Altona				2.1
Mean	1.1	1.2	1.5	1.4
LSD (0.05)	-NS-	-NS-	-NS-	-NS-

^{1/} Mean of shattering scores where:

- 1 = no shattered pods
- 2 = 1-10% shattered pods
- 3 = 10-25% shattered pods
- 4 = 25-50% shattered pods
- 5 = over 50% shattered pods

Table 22: Number of pods per plant of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (VI, VII, X Group A, X Group B)

Cultivars	Mean number of pods per plant			
	5 sites Zone VI 11-20° lat. >1000m	7 sites Zone VII 21-30° lat. 0-500m	5 sites Zone X Group A 31-40° lat. 0-500m	7 sites Zone X Group B 31-40° lat. 0-500m
Forrest	27	38	30	
Davis	25	39	30	
Bossier	25	48	39	
Ransom	20	34	27	
Gasoy 17	20	48		
Mitchell	20	32	36	30
Crawford	22			28
James	16			
Cutler 71	18	27	31	
Calland	15	28	26	23
Williams	15	26	23	22
Imp. Pelican	31	58		
Franklin	28	26	26	26
Rillito		53	32	
Elf				25
Columbus				28
Union				23
Harcor				29
Hodgson				26
Evans				28
Steele				23
Swift				23
Altona				21
Mean	22	38	30	25
LSD (0.05)	-NS-	10.1	-NS-	4.7

Table 23: Weight of 100 seeds in grams of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (VI, VII, X Group A and X Group B)

Cultivars	Mean seed weight (g/100 seeds)			
	5 sites Zone VI 11-20° lat. >1000m	7 sites Zone VII 21-30° lat. 0-500m	4 sites Zone X Group A 31-40° lat. 0-500m	6 sites Zone X Group B 31-40° lat. 0-500m
Forrest	17	15	16	
Davis	19	17	16	
Bossier	18	16	17	
Ransom	20	18	18	
Gasoy 17	19	17		
Mitchell	19	17	18	15
Crawford	20			14
James	20			
Cutler 71	21	17	17	
Calland	21	17	17	16
Williams	20	16	17	17
Imp. Pelican	15	13		
Franklin	19	16	17	16
Rillito		15	14	
Elf				16
Columbus				16
Union				17
Harcor				14
Hodgson				15
Evans				14
Steele				16
Swift				13
Altona				
Mean	19	16	17	15
LSD (0.05)	1.3	1.8	-NS-	1.9

Table 24: Quality of harvested seed of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (VI, VII, X Group A and X Group B)

Cultivars	Mean seed quality score ^{1/}			
	5 sites Zone VI 11-20° lat. >1000m	7 sites Zone VII 21-30° lat. 0-500m	5 sites Zone X Group A 31-40° lat. 0-500m	3 sites Zone X Group B 31-40° lat. 0-500m
Forrest	3.0	3.0	2.9	
Davis	2.3	2.0	2.5	
Bossier	2.7	2.4	1.8	
Ransom	2.8	2.1	2.6	
Gasoy 17	2.2	2.5		
Mitchell	2.6	3.0	3.5	3.5
Crawford	2.3			3.3
James	2.2			
Cutler 71	2.7	2.6	3.8	
Calland	2.8	3.1	3.7	3.7
Williams	2.7	2.4	2.6	3.6
Imp. Pelican	2.9	1.8		
Franklin	2.8	2.7	3.7	3.7
Rillito		2.1	2.4	
Elf				3.8
Columbus				2.8
Union				3.8
Harcor				3.9
Hodgson				3.7
Evans				3.9
Steele				3.7
Swift				4.3
Altona				4.2
Mean	2.6	2.5	2.9	3.7
LSD (0.05)	-NS-	-NS-	1.2	-NS-

^{1/} Mean of seed quality scores where:

- 1 = very good
- 2 = good
- 3 = fair
- 4 = poor
- 5 = very poor

Table 25: Percent protein and oil in cultivars observed in the Sixth ISVEX conducted in environmental zones (I, II, and III)

Cultivar	Mean protein and oil content (%)					
	10 sites Zone I 0-10° lat. 0-500m			5 sites Zone II 0-10° lat. 501-1000m		
	Protein	Oil	Protein	Oil	Protein	Oil
Caribe	46.4 (2.0) 1/	17.9 (1.7) 20.8 (1.6)	---	---	45.0 (2.9) 43.3 (4.0)	18.6 (0.4) 20.4 (1.8)
UFV-1	44.1 (2.1)	21.5 (2.3)	43.5 (1.5)	16.5 (7.6)	43.2 (2.6) 42.8 (2.6)	20.7 (2.1) 19.6 (0.8)
Bossier	44.0 (2.3)	20.4 (0.9)	---	---	---	---
CH-3	43.9 (2.0)	---	---	---	---	---
Imp. Pelican	43.8 (2.7)	21.5 (2.0)	44.2 (1.9)	19.4 (2.1)	42.8 (3.4)	20.9 (1.4)
IAC-2	43.8 (2.2)	21.7 (1.6)	---	---	43.5 (1.5)	21.0 (1.3)
Williams	43.7 (1.2)	21.5 (2.0)	43.2 (1.2)	21.0 (1.9)	41.9 (2.9)	21.7 (0.9)
Tunia	43.6 (2.2)	21.0 (1.7)	---	---	40.3 (3.6)	22.2 (2.2)
SJ-2	43.2 (2.8)	20.1 (2.4)	---	---	43.4 (2.2)	20.0 (1.7)
Jupiter	43.1 (3.0)	20.1 (3.2)	---	---	41.2 (2.8)	21.0 (2.0)
Hardee LS	42.5 (2.6)	22.3 (2.5)	---	---	42.1 (2.4)	20.6 (0.6)
Orba	42.0 (2.6)	20.2 (1.8)	---	---	39.8 (3.5)	18.4 (1.4)
Rillito	40.9 (6.7)	21.4 (2.6)	42.9 (1.6)	21.5 (1.8)	---	---
Ransom	---	---	42.4 (1.8)	22.9 (3.0)	43.0 (1.5)	22.8 (2.3)
Cobb	---	---	42.0 (3.3)	20.9 (2.5)	41.5 (2.5)	21.0 (0.8)
Gasoy 17	---	---	41.7 (1.6)	20.3 (1.4)	---	---
Mean	43.5	20.8	42.8	20.4	42.4	20.6

1/ Standard deviation

Table 26: Percent protein and oil in cultivars observed in the Sixth ISVEX conducted in environmental zones (IV and V)

Cultivar	Mean protein and oil content (%)			
	6 sites Zone IV 11 - 20° lat. 0-500m	5 sites Zone V 11 - 20° lat. 501-1000m		
	Protein	Oil	Protein	
Bossier	45.1 (1.5)	20.3 (1.8)	---	
Imp. Pelican	44.9 (1.6)	21.6 (1.6)	45.9 (1.3)	21.8 (1.1)
Ransom	44.1 (1.3)	23.0 (1.7)	---	---
Williams	43.9 (1.2)	21.7 (2.6)	44.7 (1.1)	21.6 (0.9)
Rillito	43.5 (2.0)	21.7 (1.7)	---	---
Cobb	42.2 (1.4)	21.3 (2.0)	---	---
Crawford	---	---	45.3 (1.1)	21.2 (1.8)
Calland	---	---	44.9 (0.5)	21.0 (0.7)
Cutler 71	---	---	44.9 (0.7)	21.6 (2.0)
Mitchell	---	---	43.3 (0.5)	21.8 (1.8)
Franklin	---	---	43.0 (1.5)	21.1 (1.5)
Mean	44.0	21.6	44.6	21.4

1/Standard deviation

Table 27: Percent protein and oil in cultivars observed in the Sixth ISVEX conducted in environmental zones (VI, VII, and VIII)

Cultivar	Mean protein and oil content (%)					
	6 sites Zone VI 11°-20° lat. >1000m			5 sites Zone VII 21°-30° lat. 0-500m		
	Protein	Oil	Protein	Oil	Protein	Oil
Bossier	---	---	---	---	42.6 (1.1)	19.6 (0.8)
Bossier	---	---	---	---	42.6 (1.1)	19.3 (0.3)
Bragg	---	---	---	---	42.3 (1.1)	18.3 (4.1)
Gasoy 17	41.9 (1.5) ^{1/}	18.6 (1.3)	---	---	42.0 (1.0)	19.9 (0.8)
Cutler	43.7 (1.0)	19.3 (1.5)	42.2 (1.5)	21.7 (0.7)	41.8 (1.2)	22.2 (1.8)
Ransom	43.1 (1.0)	19.1 (1.4)	42.7 (1.7)	22.6 (1.2)	41.7 (0.9)	22.3 (0.7)
Davis	43.4 (1.0)	19.9 (1.6)	42.6 (1.8)	20.8 (1.3)	41.6 (0.4)	19.7 (1.7)
Rillito	41.9 (1.7)	18.5 (2.1)	43.8 (1.6)	20.4 (1.5)	41.4 (1.1)	21.0 (0.4)
Calland	41.9 (1.8)	19.9 (1.9)	42.2 (1.2)	20.5 (0.9)	41.3 (0.8)	20.5 (1.2)
Forrest	43.4 (1.8)	19.9 (1.9)	42.4 (1.2)	20.1 (1.8)	40.7 (0.8)	20.4 (1.2)
James	43.4 (1.8)	19.9 (1.9)	41.4 (1.8)	22.1 (1.1)	40.3 (2.8)	22.3 (0.8)
Franklin	43.1 (1.1)	17.8 (2.5)	41.2 (1.4)	22.0 (1.5)	59.6 (1.5)	22.6 (0.6)
Mitchell	44.8 (1.1)	18.9 (2.5)	42.6 (1.4)	21.9 (1.5)	---	---
Williams	43.1 (1.1)	18.9 (2.5)	42.3 (1.4)	21.3 (1.5)	---	---
Imp. Pelican	43.1 (1.1)	18.9 (2.5)	42.3 (1.4)	21.3 (1.5)	41.4 (1.0)	21.3 (3.3)
Mean					41.4 (1.0)	20.7 (3.3)

^{1/} Standard deviation

Table 28: Percent protein and oil in cultivars observed in the Sixth ISVEX conducted in environmental zone X (Group A and Group B)

Cultivar	Mean protein and oil content (%)			
	8 sites Zone X 31°-40° lat. 0-500m Group A	8 sites Zone X 31°-40° lat. 0-500m Group B	Oil	Protein
Altona	42.5 (1.6) 1/	18.7 (1.6) 1/	---	---
Union	42.5 (1.3)	22.0 (1.2)	---	---
Williams	42.1 (1.1)	22.7 (1.5)	43.9 (1.4)	19.9 (1.6)
Elf	41.8 (1.6)	22.6 (1.4)	---	---
Steele	41.5 (1.5)	22.0 (1.4)	---	---
Harcor	41.5 (3.1)	21.9 (2.1)	42.0 (2.5)	20.1 (3.0)
Hodgson	40.8 (2.5)	23.0 (2.5)	---	---
Mitchell	40.7 (2.2)	21.8 (1.8)	---	---
Franklin	40.3 ---	22.2 ---	42.0 ---	19.3 (1.7)
Bossier	---	---	43.8 ---	19.7 (1.4)
Rillito	---	---	43.7 ---	19.5 (1.4)
Cutler	---	---	43.1 ---	20.1 (2.0)
Ransom	---	---	42.6 ---	21.5 (3.0)
Calland	---	---	42.4 ---	19.1 (2.3)
Gasoy 17	---	---	42.2 ---	18.4 (1.8)
Forrest	---	---	41.4 ---	19.9 (1.5)
Mean	41.5	21.9	42.7	19.8

Table 29. Characteristics of soybean varieties grown from February 25, 1978 to March 23, 1979 in one or more environmental zones

Variety	Zone	Yield, kg/ha	Flowering, days after emergence	Maturity, days after emergence	Heigght, cm.	Lodging, score	Shattered pods, /-	Pods per plant	Seed weight, g/100	Quality of seed, score	Protein, seed %	Oil, seed %
Tunia	I	2109	32	105	53	1.4	1.2	36	19	2.7	43.6	21.0
	IV	2573	39	106	58	1.3	1.5	45	17	2.3	-	-
Jupiter	I	2032	42	109	61	1.9	1.0	36	19	2.6	43.1	20.1
	III	2585	65	133	72	2.3	1.0	32	20	2.9	41.2	21.0
	IV	2210	46	111	61	1.6	1.1	47	15	1.9	-	-
Hardee LS	I	2025	40	114	54	1.4	1.1	48	17	2.4	42.5	22.3
	III	2884	65	133	60	2.2	1.0	43	17	2.0	42.1	20.6
	IV	2219	48	111	51	1.3	1.1	53	14	2.2	-	-
UFV-1	I	1997	35	103	36	1.0	1.2	28	17	2.4	44.1	20.8
	III	2275	54	122	35	1.1	1.0	32	19	2.2	43.3	20.4
	IV	2223	41	104	37	1.1	1.1	39	15	1.9	-	-
Rillito	I	1975	30	93	48	1.5	1.0	36	16	2.3	40.9	21.4
	II	1320	38	92	42	1.3	1.3	19	16	2.8	42.9	21.5
	VII	2474	46	128	80	1.7	1.0	53	15	2.1	43.8	20.4
	X-A	1888	76	174	113	2.7	1.4	32	14	2.4	-	-
Bossier	I	1961	35	100	50	1.4	1.0	30	17	2.5	44.0	21.5
	II	1641	42	101	49	1.4	1.3	17	16	2.4	43.5	16.5
	III	2225	53	110	43	1.7	1.0	25	16	2.1	43.2	20.7
	IV	2526	38	94	47	1.7	1.2	39	16	1.8	45.1	20.5
	VI	2798	45	115	60	2.6	1.1	25	18	2.7	-	-
	VII	1982	50	139	69	1.5	1.3	48	16	2.4	-	-
	X-A	2141	80	180	105	2.8	1.6	39	17	1.8	-	-

Table 29 (continued). Characteristics of soybean varieties grown from February 15, 1978 to March 23, 1979
in one or more environmental zones

Variety	Zone	Yield, kg/ha	Height, cm.	Log-leafing, score	Shattering, score	Pods per plant	Seed weight, g/100	Quality of seed, %	Protein, %	Oil, seed, %
Davis	VI	2935	43	112	55	1.5	1.1	25	19	2.3
	VII	2119	51	131	60	1.3	1.2	39	17	2.0
	X-A	2093	77	176	104	2.0	1.4	30	16	2.5
Ransom	VI	2791	34	105	38	1.1	1.0	20	20	2.8
	VII	2151	44	132	50	1.1	1.0	34	18	2.1
	X-A	2357	74	179	98	2.3	1.4	27	18	2.6
Gasoy 17	VI	2683	33	102	38	1.1	1.1	20	19	2.2
	VII	2015	47	135	58	1.3	1.1	48	17	2.5
Mitchell	VI	2617	29	96	49	1.3	1.0	20	19	2.6
	VII	1831	32	106	58	1.2	1.2	32	17	3.0
	X-A	2623	49	142	94	2.0	1.4	36	18	3.5
	X-B	2314	39	115	76	1.6	1.5	30	15	3.5
Crawford	VI	2593	30	98	50	1.1	1.0	22	20	2.3
	X-B	2283	31	90	61	1.5	1.3	28	14	3.3
James	VI	2470	31	100	47	1.3	1.3	16	20	2.2
Cutler 71	VI	2433	30	96	49	1.1	1.0	18	21	2.7
	VII	1579	31	101	55	1.2	1.2	27	17	2.6
	X-A	2147	41	138	93	2.1	1.4	31	17	3.8
Calland	VI	2262	28	100	43	1.3	1.4	15	21	2.8

Table 29 (continued). Characteristics of soybean varieties grown from February 25, 1978 to March 23, 1979
in one or more environmental zones

Imp. Pelican	I	1860	35	99	66	1.8	1.1	33	15	2.1	43.8	21.5
	II	1723	42	96	53	1.4	1.3	21	14	2.0	44.2	19.4
	III	2620	57	118	61	1.9	1.0	32	16	1.6	42.8	20.9
	IV	2179	40	100	67	2.0	1.5	41	13	1.9	45.1	20.3
	VI	2124	51	120	82	2.7	1.5	31	15	2.9	44.8	17.8
	VII	2058	68	139	109	2.4	1.3	58	13	1.8	-	-
Williams	I	1853	29	90	46	1.3	1.0	22	19	2.1	43.7	21.5
	II	1588	37	92	43	1.4	1.5	15	20	2.4	43.2	21.0
	III	1946	44	101	55	1.3	1.0	18	21	2.3	41.9	21.7
	IV	2024	31	89	41	1.3	1.4	28	17	2.0	43.9	21.7
	VI	2158	28	93	39	1.0	1.0	15	20	2.7	-	-
	VII	1560	30	101	50	1.1	1.3	26	16	2.4	42.6	21.9
	X-A	2321	42	143	84	1.2	1.3	23	17	2.6	42.1	22.7
	X-B	2292	37	104	67	1.4	1.2	22	17	3.6	43.9	19.9
SJ-2	I	1849	36	104	62	2.0	1.5	40	15	2.1	43.2	20.1
	III	2497	56	122	62	2.6	1.0	36	14	1.9	43.4	20.0
	IV	1778	43	97	58	1.3	1.4	66	13	2.3	-	-
IAC-2	I	1836	35	106	64	1.7	1.2	37	17	2.3	43.8	21.7
	III	2252	54	123	63	2.6	1.0	31	19	2.5	43.5	21.0
	IV	2052	43	106	70	2.4	1.3	53	15	1.9	-	-
CH3	I	1812	35	109	74	2.1	1.2	36	16	2.6	43.9	20.4
	III	2356	54	127	76	2.8	1.0	34	15	2.4	42.8	19.6
Caribe	I	1755	36	117	73	2.0	1.5	46	14	2.8	46.4	17.9
	IV	1825	43	115	72	2.3	1.0	58	12	2.0	-	-
Orba	I	1671	34	95	60	2.3	2.1	34	14	2.2	42.0	20.2
	III	2287	59	115	68	3.0	2.2	31	15	2.1	39.8	18.4
	IV	1996	41	95	68	2.3	1.9	44	13	1.9	-	-
Forrest	VI	3035	37	108	53	1.4	1.0	27	17	3.0	41.9	18.5
	VII	1504	45	123	51	1.1	1.0	38	15	3.0	42.4	20.1
	X-A	2140	66	156	94	1.9	1.3	30	16	2.9	-	-

Table 29 (continued).

*Characteristics of soybean varieties grown from February 15, 1978 to March 23, 1979
in one or more environmental zones*

Calland	VII	1661	29	102	55	1.1	1.2	28	17	3.1	42.2	20.5
	X-A	2513	40	134	95	1.9	1.6	26	17	3.7	-	-
	X-B	2404	36	107	76	1.5	1.3	23	16	3.7	42.4	19.1
Franklin	VI	2010	28	93	42	1.0	1.0	28	19	2.8	-	-
	VII	1567	30	102	54	1.1	1.2	26	16	2.7	41.4	22.1
	X-A	2269	40	132	95	1.8	1.6	26	17	3.7	40.3	22.2
	X-B	2360	39	115	77	1.5	1.3	26	16	3.7	42.0	19.3
Elf	X-B	2480	38	108	45	1.0	1.4	25	16	3.8	-	-
Columbus	X-B	2363	40	120	79	1.6	1.2	28	16	3.8	-	-
Union	X-B	2322	38	110	77	1.4	1.2	23	17	3.8	-	-
Harcor	X-B	2168	33	95	64	1.7	1.5	29	14	3.9	42.0	20.1
Hodgson	X-B	2033	32	87	57	1.6	1.4	26	15	3.7	-	-
Evans	X-B	2027	38	107	70	1.6	1.4	28	14	3.9	-	-
Steele	X-B	1804	30	86	59	1.6	1.4	23	16	3.7	-	-
Swift	X-B	1589	30	86	57	1.8	1.7	23	13	4.3	-	-
Altoma	X-B	1324	28	76	51	1.8	2.1	21	14	4.2	-	-

1/ See pages 3 and 5 for description of scoring.

Table 30. Characteristics of late maturing varieties in one or more zones expressed as the percent of the mean of Bossier, Improved Pelican and Williams in the same zone

Percent of the mean of 4 checks

Variety	Zone	Yield, grain	Days to flowering	Days to maturity	Height	Pods/Plant	Weight/seed	Quality
Tunia	I	111.5	97.0	109.0	98.1	127.2	111.8	121.1
	IV	114.7	107.4	112.4	112.4	125.0	111.1	121.1
Jupiter	I	107.5	127.3	113.2	113.0	127.2	111.8	116.2
	III	114.2	126.7	121.2	155.5	128.0	113.0	145.0
	IV	98.5	126.7	117.7	118.2	130.5	98.0	100.0
Hardee, L.S.	I	107.1	121.2	118.4	100.0	169.6	100.0	107.5
	III	127.4	126.7	121.1	129.6	172.0	96.0	100.0
	IV	98.9	132.2	117.7	98.8	147.2	91.5	105.3
UFV-1	I	105.6	106.1	107.0	66.7	98.9	100.0	107.6
	III	100.6	105.3	111.2	75.5	128.0	107.3	110.0
	IV	99.1	112.9	110.3	77.7	108.3	98.0	100.0
Rillita	I	104.4	90.9	96.6	88.9	127.2	94.1	103.1
	II	80.0	94.3	95.5	87.0	107.3	95.8	123.3
	VII	132.5	93.3	101.3	105.3	120.5	100.0	95.5
Bossier	I	103.7	106.1	103.8	92.6	106.0	100.0	112.1
	II	99.4	104.2	104.9	101.4	96.0	95.8	105.7
	III	98.3	103.3	100.3	92.9	100.0	90.4	105.0
	IV	112.6	104.7	99.7	91.1	108.3	104.6	94.7
	VI	118.5	109.0	105.2	99.5	105.5	101.7	97.5
	VII	106.2	101.4	110.2	90.8	109.1	93.8	109.1

Table 30 (continued)

Imp. Pelican	I	98.4	106.1	102.8	122.2	116.6	88.2	94.2
	II	104.4	104.2	99.7	109.7	96.0	83.8	88.1
	III	115.7	111.1	107.6	131.7	128.0	90.4	80.0
	IV	97.1	110.2	106.0	129.8	113.9	85.0	100.0
	VI	90.0	123.5	109.8	136.0	130.8	84.7	104.7
	VII	110.2	137.9	110.1	143.4	131.8	86.7	81.8
Williams	I	98.0	87.9	93.5	85.2	77.7	111.8	94.2
	II	96.2	91.8	95.5	89.0	84.7	119.8	105.7
	III	86.0	85.8	92.1	75.6	72.0	118.6	115.0
	IV	90.2	85.4	94.4	79.5	77.8	111.1	105.3
	VI	91.4	67.8	85.1	64.7	63.3	113.0	97.5
	VII	83.6	60.9	80.0	65.8	59.1	106.7	109.1
SJ-2	I	97.8	109.1	108.1	114.8	141.3	88.2	94.2
	III	110.3	109.2	111.2	133.9	144.0	79.1	95.0
	IV	79.3	118.5	102.9	112.4	183.3	85.0	121.1
IAC-2	I	97.1	106.1	110.1	118.5	130.7	100.0	103.1
	III	99.5	105.3	112.1	136.1	124.0	107.3	125.0
	IV	91.5	118.5	112.4	135.7	147.2	98.0	100.0
CH-3	I	95.8	106.1	113.2	137.0	127.2	94.1	116.6
	III	104.1	105.3	115.8	164.1	136.0	84.7	120.0
Caribe	I	92.8	109.1	121.5	135.2	162.5	82.4	125.6
	IV	81.4	118.5	122.0	139.5	161.1	78.4	105.3
Orba	I	88.4	103.0	98.7	111.1	120.1	82.4	98.7
	III	101.0	115.0	104.8	146.9	124.0	84.7	105.0
	IV	89.0	112.9	100.7	131.8	122.2	86.7	100.0

Table 31. Characteristics of early maturing varieties in one or more zones expressed as the percent of the mean of Williams, Mitchell, Calland and Franklin in the same zone

Percent of the mean of 4 checks

Variety	Yield, grain None	Field, grain				Days to flowering	Days to maturity	Height	Pods/plant	Weight/seed	Quality
		VI	VII	X-A	X-B						
Williams	95.4	99.1	97.4	90.2	76.9	101.3	98.9				
	94.3	99.2	98.3	92.2	92.9	97.0	85.7				
	95.5	98.2	103.1	91.3	82.9	98.6	76.9				
	97.8	98.0	94.3	90.5	87.1	106.3	99.2				
Mitchell	115.7	102.7	100.5	113.3	102.6	96.2	95.2				
	110.6	105.8	103.2	106.9	114.3	103.0	107.1				
	107.9	114.6	103.1	102.2	129.7	104.3	103.6				
	98.8	103.3	104.3	102.7	118.8	93.8	96.4				
Calland	100.0	99.1	104.7	99.4	76.9	106.3	102.6				
	100.4	95.9	99.3	101.4	100.0	103.0	110.7				
	103.4	93.6	97.3	103.3	93.7	98.6	109.5				
	102.6	95.4	97.1	102.7	91.1	100.0	101.9				
Franklin	88.9	99.1	97.4	97.1	143.6	96.2	102.6				
	94.7	99.2	99.3	99.5	92.9	97.0	96.4				
	93.3	93.6	95.8	103.3	93.7	98.6	109.5				
	100.7	103.3	104.3	104.1	103.0	100.0	101.9				
Forrest	134.2	131.0	113.1	122.5	138.5	86.1	109.9				
	90.9	148.8	119.7	94.0	135.7	90.9	107.1				
	88.0	154.4	113.2	127.0	108.1	92.8	85.8				
Davis	129.8	152.2	117.3	127.2	128.2	96.2	84.2				

Table 31 (continued)

	VII	128.1	168.5	127.5	110.6	139.3	103.0	71.4
	X-A	86.4	180.1	127.8	113.0	108.1	92.8	74.0
Ransom	VI	123.4	120.4	109.9	87.9	102.6	101.3	102.6
	VII	130.0	145.5	128.5	92.2	121.4	109.1	75.0
	X-A	96.9	173.1	129.9	106.5	97.3	104.3	76.9
Gasoy 17	VI	118.6	116.8	106.8	87.8	102.6	96.2	80.6
	VII	121.8	155.4	131.4	106.9	88.5	103.2	89.3
Crawford	VI	114.6	106.2	102.6	115.6	112.8	101.3	84.2
	X-B	97.5	82.1	81.6	82.4	110.9	87.5	90.9
James	VI	109.2	109.7	104.7	108.7	82.1	101.3	80.6
Cutler 71	VI	107.6	106.2	100.5	113.3	92.3	106.3	98.9
	VII	95.4	102.6	98.3	97.7	96.4	103.0	92.9
	X-A	88.3	95.3	100.2	101.1	111.7	98.6	112.4
Elf	X-B	105.9	100.7	98.0	60.8	99.0	100.0	104.7
Columbus	X-B	100.9	106.0	108.8	106.8	110.9	100.0	77.1
Union	X-B	99.1	100.7	99.8	104.1	91.1	106.3	104.7
Harcor	X-B	92.6	87.4	86.2	86.5	114.9	87.5	107.4
Hodgson	X-B	86.8	84.8	78.9	77.0	103.0	93.8	101.9
Evans	X-B	86.5	100.7	97.1	94.6	110.9	87.5	107.4
Steele	X-B	77.0	79.5	78.0	79.7	91.1	100.0	101.9
Swift	X-B	67.8	79.5	78.0	77.0	91.1	81.3	118.5
Altona	X-B	56.5	74.2	68.9	68.9	83.2	87.5	115.7

Table 32. Number of days from emergence to flowering and number of days from flowering to maturity of late maturing varieties. Covariance analysis is given to indicate the relationship between the two characters.

Variety	ZONE			Variety Mean		
	I	II	III	IV	Flower	Maturity
	Flower	Maturity	Days Flower	Maturity	Flower	Maturity
Jupiter	42	67	65	68	46	65
Hardee, LS	40	74	65	68	48	63
UFV-1	35	68	54	68	41	63
Bossier	35	65	53	57	38	56
Imp. Pelican	35	64	57	61	40	60
Williams	29	61	44	57	31	58
SJ-2	36	68	56	66	43	54
IAC-2	35	71	54	69	43	63
Orba	34	61	59	56	41	54
Location mean	35.7	66.6	56.3	63.3	41.2	59.6

Covariance analysis						
Source	d.f.	$\Sigma x^2 / 1$	Σxy	$\Sigma y^2 / 1$	γ	
Total	26	2690.5	142.37	757.41		
Variety	8	568.5	311.04	434.07	.63*	
Zone	2	2059.0	-145.19	220.96	-.22	
V x Z	16	63.0	-23.48	102.37	-.29	

1/ X = days from emergence to flowering.
Y = days from flowering to maturity

* $p \leq .05$

Table 33. Number of days from emergence to flowering and number of days from flowering to maturity of early maturing varieties. Covariance analysis is given to indicate the relationship between the two characters.

Variety	ZONE		VI		VII		X-A		Variety	
	Flower	Maturity	Flower	Maturity	Days	Maturity	Flower	Maturity	Flower	Maturity
Bossier	38	56	50	89			80	100	56.0	81.7
Williams	31	58	30	71			42	101	34.3	76.7
Forrest	37	71	45	78			66	90	49.3	79.7
Davis	43	69	51	80			77	99	57.0	82.7
Ransom	34	71	44	88			74	105	50.7	88.0
Mitchell	29	67	32	74			49	93	36.7	78.0
Cutler	30	66	31	70			41	97	34.0	77.7
Calland	28	72	29	73			40	94	32.3	79.7
Franklin	28	65	30	72			40	92	32.7	76.3
Location mean		33.1	66.1		38.0	77.2		56.6	96.8	

Covariance analysis	d.f.	$\Sigma_x^2 / 1$	$\Sigma_y^2 / 1$
Source			
Total	26	6086.7	5200.96
Variety	8	2636.7	667.11
Zone	2	2753.6	324.50
V x Z	16	696.4	4338.96
			.0995

1/ X = days from emergence to flowering
 Y = days from flowering to maturity
 * P ≤ .05
 ** P < .01

TABLES OF DATA FROM INDIVIDUAL SITES

TABLE 34 COMBINED ANALYSIS FOR SITES IN ZONE I, ISUVEX 1978

VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND. 1		NODULE ABUND. 2		NODULE ACT. 1		NODULE ACT. 2		PLANT HEIGHT	LOGGING
				ABUND.	1	ABUND.	2	ACT.	1	ACT.	2		
TUNIA	2109.26	32.04	105.33	3.13	2.92	72.78	68.38	52.61	1.35	61.32	61.32	1.92	
JUPITER	2031.73	42.40	109.02	3.20	2.94	67.44	73.59	54.39	1.42	54.39	54.39	1.42	
HARDEE LS	2025.46	39.92	113.96	3.00	2.78	65.97	73.03	66.84	3.30	66.84	66.84	1.04	
UVF 1	1996.66	34.88	103.42	3.20	3.00	67.03	67.67	59.16	48.43	48.43	48.43	1.52	
RILLITO	1975.39	30.33	92.83	3.05	3.08	67.67	69.67	67.88	49.70	49.70	49.70	1.44	
BOSSIER	1961.21	35.46	99.56	3.05	3.06	69.67	68.17	60.00	66.04	66.04	66.04	1.79	
IMPROVED PELICAN	1859.95	34.90	99.17	8.95	3.06	68.17	65.22	63.66	46.00	46.00	46.00	1.27	
WILLIAMS	1853.13	28.75	89.63	2.85	3.06	65.22	63.72	62.41	62.41	62.41	62.41	1.98	
S.J. 2	1848.90	35.67	103.73	3.20	3.25	69.17	63.72	66.03	63.67	63.67	63.67	1.65	
IAC 2	1835.76	34.75	105.54	3.25	3.11	67.92	66.25	67.03	73.87	73.87	73.87	2.12	
CH 3	1812.26	34.77	109.44	3.10	2.89	62.55	71.06	73.44	72.88	72.88	72.88	2.08	
CARIBE	1754.29	36.46	116.60	2.98	2.92	71.06	73.44	72.88	72.88	72.88	72.88	2.08	
OREA	1670.53	34.38	94.73	3.10	2.97	70.92	64.63	60.03	2.25	60.03	60.03	2.25	
GRAND MEAN	1902.71	34.98	103.30	3.54	3.00	68.40	66.72	57.51	1.68	1.68	1.68	1.68	
NUMBER EXPERIMENTS CONTRIBUTING	1.3	1.3	1.2	1.0	9	9	8	13	13	13	13	13	
STANDARD ERROR OF VARIETY MEAN	131.75	6.7	1.92	1.64	10	4.1	3.29	2.29	2.29	2.29	2.29	2.29	
COEFFICIENT OF VARIATION	49.93%	13.79%	12.85%	292.94%	19.49%	21.12%	27.93%	27.93%	27.93%	27.93%	27.93%	27.93%	
5% LSD VARIETY MEANS (**NS=NS)	*****	1.87	5.36	*****	*****	*****	9.27	6.40	6.40	6.40	6.40	6.40	.49
CORRELATIONS AND NUMBER OF OBSERVATIONS (\downarrow = PROB=.05, \uparrow = PROB=.01)													
YIELD	KG/HA	1.00	*20++	*23++	-.05	-.51++	-.48++	-.19++	-.19++	-.38++	-.38++	.02	
DAYS TO FLOWER		676	676	624	520	468	468	416	416	676	676	676	
DAYS TO MATURITY		676	676	624	520	468	468	416	416	676	676	676	
NODULE ABUND 1		624	624	624	624	468	416	364	364	624	624	624	
NODULE ABUND 2		520	520	468	520	468	416	364	364	520	520	520	
NODULE ACT. 1		468	468	416	416	468	364	364	364	468	468	468	
NODULE ACT. 2		468	468	416	416	468	364	364	364	468	468	468	
PLANT HEIGHT		416	416	364	364	416	416	416	416	416	416	416	
LOGGING		676	676	624	520	468	468	416	416	676	676	676	
SHATTER		520	520	468	520	468	468	416	416	676	676	676	
PLANTS HARVEST		624	624	572	520	468	468	416	416	624	624	624	
PODS PER PLANT		676	676	624	520	468	468	416	416	624	624	624	
POD HEIGHT		676	676	624	520	468	468	416	416	676	676	676	
100 SEED WEIGHT		676	676	624	520	468	468	416	416	624	624	624	
QUALITY OF SEED		676	676	624	520	468	468	416	416	676	676	676	
PERCENT GERM.		624	624	572	520	468	468	364	364	624	624	624	

TABLE 34 COMBINED ANALYSIS FOR SITES IN ZONE I, ISSUE 1978

VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
TUNIA	1.15	128.45	36.06	11.34	18.56	2.65	68.71
JUPITER	1.03	159.52	36.49	13.71	19.07	2.63	64.75
HARDEE LS	1.08	132.96	48.30	11.78	16.61	2.40	68.79
UFV 1	1.20	172.06	28.13	9.92	16.69	2.35	75.68
FILLITO	1.03	162.44	36.16	8.00	16.21	2.31	64.39
BOSSIER	1.00	186.50	29.52	12.21	16.67	2.54	69.36
IMPROVED FELICAN	1.10	194.75	33.30	12.60	15.14	2.10	72.89
WILLIAMS	1.00	200.77	22.43	8.86	18.58	2.10	71.50
SJ 2	1.48	161.63	40.42	12.60	14.89	2.08	78.04
IAC 2	1.23	153.19	36.80	13.15	16.66	2.31	68.75
CH 3	1.28	158.27	35.84	12.46	15.65	2.58	69.21
CARIBE	1.50	161.58	45.98	11.34	13.53	2.81	67.64
ORBA	2.10	185.42	33.90	11.53	13.66	2.21	86.89
GRAND MEAN	1.24	165.98	35.64	11.50	16.30	2.39	71.28
NUMBER EXPERIMENTS CONTRIBUTING	1.0	1.2	1.3	1.2	1.3	1.2	7.7
STANDARD ERROR OF VARIETY MEAN	*15	8.19	2.64	*60	*50	*16	4.39
COEFFICIENT OF VARIATION	74.42%	34.17%	53.35%	36.37%	22.18%	45.26%	32.61%
5% LSD VARIETY MEANS (****=NS)	.41	22.90	7.37	1.69	1.40	.44	12.38
CORRELATIONS AND NUMBER OF OBSERVATIONS							
YIELD KG/HA	-.21++	.02	.38++	.01	.36++	-.06	.674+
DAYS TO FLOWER	520	624	676	624	676	624	364
DAYS TO MATURITY	520	624	676	624	676	624	364
NODULE ABUND 1	*21++	-.37++	*24++	-.09+	*27++	*36++	-.17++
NODULE ABUND 2	*04	572	624	572	624	572	364
NODULE ACT. 1	468	520	520	520	520	520	364
NODULE ACT. 2	-08	*29++	-.31++	*14++	-.16++	-.05	-.28++
PLANT HEIGHT	416	468	468	468	468	468	364
NODULE ACT. 1	*10+	-.47++	*03	-.28++	.11+	*21++	-.53++
NODULE ACT. 2	468	468	468	468	468	416	312
LOGGING	520	624	676	624	676	624	364
SHATTER	1.00	-.14++	-.01	-.12++	-.18++	-.22++	-.29++
PLANTS HARVEST	520	520	520	520	520	468	364
PODS PER PLANT	520	624	676	624	676	624	364
POD HEIGHT	-1.24+	.17++	-.15++	1.00	-.18++	-.30++	-.20++
100 SEED WEIGHT	520	520	572	572	572	572	364
QUALITY OF SEED	*22++	-.32++	*11++	-.30++	*15++	1.00	*50++
PERCENT GERM.	468	572	624	572	624	624	364
	-20++	*33++	-.00	*42++	-.13+	-.50++	1.00
	312	364	364	364	364	364	364

TABLE 35 COMBINED ANALYSIS OF AFRICAN SITES IN ZONE 1 ISVEX 1978

VARIETY	YIELD KG/HA	DAY TO FLOWER	DAY TO MATURITY	NODULE ABUND. 1	NODULE ABUND. 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LONGING
BOSSIER	1588.96	34.56	102.17	3.25	3.75	86.25	91.25	47.96	1.56
JUPITER	1554.37	41.31	108.67	3.33	3.75	92.92	96.87	58.26	1.50
UFV 1	1477.07	34.44	103.90	3.33	3.75	89.17	89.38	37.74	1.13
HARDEE LS	1475.09	39.06	116.17	3.09	3.63	85.00	93.13	49.58	1.13
CARIBE	1428.93	36.56	127.33	3.25.	4.00	90.00	95.63	71.38	2.00
TAC 2	1331.00	34.06	108.58	3.50	4.00	92.08	85.00	57.80	1.75
IMPROVED PELICAN	1311.41	33.56	98.50	3.17	3.88	93.33	81.88	55.01	1.63
WILLIAMS	1289.01	26.56	84.42	2.83	4.00	85.42	84.38	39.38	1.75
ORBA	1208.26	33.44	94.42	3.08	3.75	93.33	95.00	52.24	2.13
RILLITO	1195.03	28.50	88.33	3.33	3.88	86.67	88.13	42.70	1.81
SJ 2	1177.53	35.25	105.67	3.42	4.00	94.17	88.13	52.50	1.75
TUNIA	1101.78	29.75	110.33	3.33	3.88	92.50	98.13	43.00	1.19
RANSOM	1093.55	27.44	94.92	3.25	4.00	90.83	84.38	32.07	1.19
CH 3	1092.20	34.13	116.25	3.33	3.88	87.92	91.25	64.47	2.31
GRAND MEAN	1308.87	33.47	104.55	3.25	3.83	89.97	90.18	50.30	1.63
NUMBER EXPERIMENTS CONTRIBUTING	4			3	2	3	2	4	4
STANDARD ERROR OF VARIETY MEAN	156.09	1.28	3.46	*19		3.45	5.94	*2.45	*3.0
COEFFICIENT OF VARIATION	47.70%	15.31%	11.45%	20.36%	14.30%	13.28%	18.63%	19.49%	72.66%
5% LSD VARIETY MEANS (*****NS)	*****NS	3.66	10.05	*****NS	*****NS	*****NS	*****NS	7.01	*****NS
CORRELATIONS AND NUMBER OF OBSERVATIONS (4 - PROB==.05, 4+ - PROB==.01)									
YIELD	KG/HA	1.00	*11	*14	*22+	*10	*05	-.02	*484+
DAY TO FLOWER		224	224	168	168	112	168	112	224
DAY TO MATURITY		*11	1.00	*54+	*30+	*13	*22+	*23+	-.14+
NODULE ACT. 1		-11	224	168	168	112	168	112	224
NODULE ACT. 2		*11	*54+	1.00	*13	*05	*15	*14	-.10
NODULE ACT. 1		168	168	1.00	1.00	*18	*53+	*56	1.68
NODULE ACT. 2		*224	*30+	*13	1.00	1.00	1.00	*08	*35+
NODULE ACT. 1		168	168	112	168	112	168	112	1.68
NODULE ACT. 2		*10	*13	*05	*18	1.00	*07	*09	-.16
NODULE ACT. 1		112	112	56	112	112	112	112	1.12
NODULE ACT. 2		*05	*224	*15	*53+	*07	1.00	*22+	*19+
NOTURE ACT. 1		168	168	112	168	112	168	112	1.68
NOTURE ACT. 2		*02	*23+	*14	*08	*09	*22+	1.00	*05
SHATTER		-34+	*30+	*35+	*47+	*07	*23+	*17	*224+
PLANT HEIGHT		*48+	*13	*10	*35+	*16	*19+	*05	1.00
PLANTS HARVEST		224	224	168	168	112	168	112	224
LONGING		*12	*14+	*00	*26+	*09	*06	-.33+	*51+
SHATTER		224	224	168	168	112	168	112	224
FOD HEIGHT		168	168	112	168	112	168	112	224
FOD HARVEST		*24+	*08	*38+	*22+	*11	*17	-.09	*06
FOD PER PLANT		224	224	168	168	112	168	112	224
QUALITY OF SEED		*34+	*26+	*36+	*01	*06	*06	*05	*37+
PERCENT GERM.		224	224	168	168	112	168	112	224
PERCENT GERM.		*24+	*20+	*16	*41+	*08	*31+	*08	*29+

TABLE 35 COMBINED ANALYSIS OF AFRICAN SITES IN ZONE 1 ISUVEX 1978

VARIETY	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
ROSSIER	1.00	175.06	24.06	11.58	18.71	2.44	57.63
JUPITER	1.08	146.50	34.06	13.83	20.93	2.50	52.75
UVV 1	1.33	154.50	23.44	10.46	17.41	2.44	64.38
HARDEE LS	1.17	114.88	38.76	11.00	18.38	2.50	54.63
CARIBE	1.92	149.13	48.73	8.83	14.33	2.75	59.88
TAC 2	1.42	136.81	26.83	14.83	18.00	2.13	46.25
IMPROVED FELICAN	1.25	192.25	24.97	13.25	16.06	2.13	62.38
WILLIAMS	1.00	200.25	15.83	9.25	19.16	2.06	54.88
ORBA	1.75	168.38	24.16	12.83	14.91	2.25	74.25
RILLITO	1.08	145.94	27.02	8.83	17.37	2.13	42.75
SJ 2	1.75	137.00	25.04	12.75	15.21	2.44	64.88
TUNIA	1.42	88.63	26.07	10.50	20.34	2.81	68.13
RANSOM	1.33	165.75	18.26	7.83	16.42	2.38	39.75
CH 3	1.50	130.25	26.91	12.17	16.11	2.69	48.50
GRAND MEAN	1.36	150.38	27.44	11.28	17.52	2.40	56.50
NUMBER EXPERIMENTS CONTRIBUTING	3	4	4	3	4	4	2
STANDARD ERROR OF VARIETY MEAN	69.372	16.41	4.75	1.26	.70	.26	9.12
COEFFICIENT OF VARIATION	69.372	43.64%	69.18%	38.71%	15.86%	43.00%	45.67%
5% LSD VARIETY MEANS (*****=NS)	*****	46.93	13.57	3.67	1.99	*****	*****

CORRELATIONS AND NUMBER OF OBSERVATIONS (+ = PROB=.05, ++ = PROB=.01)

YIELD	KG/HA	-.34++	.24++	.34++	.41++	.41++	.21+
DAYS TO FLOWER		.168	.224	.224	.168	.224	.224
DAYS TO MATURITY		.30++	-.08	.26++	.02	-.10	-.20+
NODULE ABUND 1		.168	.224	.224	.168	.224	.112
NODULE ABUND 2		.112	-.38++	.36++	-.12	.22++	.41++
NODULE ACT. 1		-.47++	-.22++	-.01	.26++	.07	-.12
NODULE ACT. 2		.07	-.11	.06	-.14	.14	-.08
PLANT HEIGHT		.112	.112	.112	.112	.112	.112
LOGGING		-.23++	-.17+	-.06	.09	-.10	.00
SHATTER		.168	.168	.168	.168	.168	.168
PLANTS HARVEST		1.00	-.09	.05	-.14	.01	.15
PODS PER PLANT		.168	.224	.224	.168	.224	.224
POD HEIGHT		-.22++	.09	.37++	.67++	.07	.32++
100 SEED WEIGHT		1.00	-.20++	.224	.168	.224	.224
QUALITY OF SEED		.168	-.20++	1.00	.04	-.05	.20++
PERCENT GERM.		-.21+	.04	-.24++	-.36++	.28++	-.21+

TABLE 36 COMBINED ANALYSIS FOR OCEANIA AND ASIAN SITES IN ZONE I

VARIETY OR CROSS	YIELD KG/HA	YEARS TO FLOWER	YEARS TO MATURITY	NODELLE ABUND 1	NODELLE ABUND 2	NODELLE ACT. 1	NODELLE ACT. 2	PLANT HEIGHT	LONGING
CH 3	1954.66	34.00	97.25	4.00	2.25	56.67	55.00	67.26	1.50
SJ 2	1947.26	34.25	92.63	3.75	2.25	67.50	52.92	55.61	1.25
SUBITER	1871.63	39.63	101.63	3.50	2.00	62.08	63.75	46.69	1.00
HARDEE LS	1674.71	38.38	105.75	3.00	1.75	64.17	70.00	33.99	1.00
UNIA	1652.00	32.56	95.25	3.25	2.25	76.25	45.00	42.84	1.00
RILLITO	1585.84	30.06	87.38	3.25	2.50	63.75	36.25	34.55	1.00
CARIBE	1563.75	35.56	111.00	3.50	2.25	71.25	73.75	65.62	1.00
TAC 2	1557.19	34.00	96.75	3.50	2.50	57.08	60.42	51.36	1.25
IMPROVED FELICAN	1533.95	34.38	89.63	63.00	3.00	50.83	43.75	62.94	1.75
ORBA	1525.31	33.56	88.56	3.75	2.25	52.50	38.75	51.15	1.25
ESSIER	1507.07	34.00	93.88	3.00	2.50	71.25	40.42	40.73	1.00
WILLIAMS	1405.70	28.69	84.75	3.00	2.50	63.75	57.50	35.48	1.00
UFU 1	1181.90	33.00	98.25	4.00	2.50	60.42	62.08	26.15	1.00
GRAND MEAN	1612.38	34.00	95.59	8.04	2.35	62.88	53.81	47.26	1.15
NUMBER EXPERIMENTS CONTRIBUTING	4	4	4	2	2	3	3	4	4
STANDARD ERROR OF VARIETY MEAN	175.07	.67	2.13	10.70	.18	6.31	6.13	3.97	.24
COEFFICIENT OF VARIATION	43.43%	7.94%	8.91%	376.53%	22.23%	34.77%	39.48%	33.61%	83.27%
5% LSD VARIETY MEANS (**NS=NS)	*****	1.94	6.11	30.10	.52	*****	17.90	11.39	*****
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ - PROB=.05, ++ - PROB=.01)									
YIELD	KG/HA	1.00	.13	.54++	-.01	-.20+	-.18+	.44++	.58++
YEARS TO FLOWER		208	208	208	1.04	1.04	1.04	156	208
YEARS TO MATURITY			1.00	.63++	.01	-.29++	.25++	-.14	.08
NODELLE ABUND 1				.54++		1.04	1.04	156	208
NODELLE ABUND 2				.63++		-.31++	.21++	.12	-.05
NODELLE ACT. 1				.01		1.04	1.04	156	208
NODELLE ACT. 2				.01		1.04	1.04	156	208
PLANT HEIGHT				.01		1.04	1.04	104	104
LONGING				.01		1.04	1.04	104	104
SHATTER				.01		1.04	1.04	104	104
PLANTS HARVEST				.01		1.04	1.04	104	104
FOLIAGE PLANT				.01		1.04	1.04	104	104
POD HEIGHT				.01		1.04	1.04	104	104
100 SEED WEIGHT				.01		1.04	1.04	104	104
QUALITY OF SEED				.01		1.04	1.04	104	104
PERCENT GERM.				.01		1.04	1.04	104	104

TABLE 36 COMBINED ANALYSIS FOR OCEANIA AND ASIAN SITES IN ZONE I

VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
CH 3	1.00	228.25	35.18	12.03	13.16	1.50	.00
SJ 2	1.00	228.63	40.78	13.34	11.21	1.00	.00
JUPITER	1.00	214.50	31.46	14.05	13.20	1.75	.00
HARDEE LS	1.00	183.94	40.56	11.39	12.24	1.50	.00
TUNIA	1.00	169.88	35.11	10.09	16.18	1.25	.00
RILLITO	1.00	216.56	30.59	7.89	12.89	1.25	.00
CARIBE	1.00	204.94	45.49	11.68	8.69	1.75	.00
JAC 2	1.00	213.00	33.69	11.61	12.56	1.50	.00
IMPROVED PELICAN	1.00	267.13	30.29	12.26	11.61	1.75	.00
ORBA	1.00	232.75	30.53	9.08	11.95	1.50	.00
FOSSIER	1.00	265.94	25.83	9.43	12.83	1.75	.00
WILLIAMS	1.00	262.81	17.82	9.24	16.58	1.50	.00
UFV 1	1.00	223.50	22.30	7.34	12.38	1.75	.00
GRAND MEAN	1.00	223.99	32.28	10.77	12.73	1.52	.00
NUMBER EXPERIMENTS CONTRIBUTING	4	4	4	4	4	2	0
STANDARD ERROR OF VARIETY MEAN	*.00	14.04	4.06	*.70	*.62	*.17	.00
COEFFICIENT OF VARIATION	*.00%	25.08%	50.30%	26.02%	19.37%	31.68%	.002
5% LSD VARIETY MEANS (**NS=NS)	*.00	40.27	11.64	2.01	1.77	*.48	.00
CORRELATIONS AND NUMBER OF OBSERVATIONS (+= FROB=.05, ++= FROB=.01)							
YIELD KG/HA	*.00	*.51++	*.30++	*.09	*.55++	-.10	.00
DAYS TO FLOWER	208	208	208	208	208	104	0
DAYS TO MATURITY	*.00	-.04	-.20++	*.51++	*.08	*.14	*.00
NOTULE ABUND 1	208	208	208	208	208	104	0
NOTULE ABUND 2	*.00	*.05	*.11	-.07	-.14	*.14	*.00
NOTULE ACT. 1	*.00	1.04	1.04	1.04	1.04	104	0
NOTULE ACT. 2	*.00	-.02	*.60++	-.03	-.36++	*.16	*.00
PLANT HEIGHT	*.00	*.31++	-.31++	-.09	-.09	*.04	*.00
NOTULE ACT. 1	1.04	1.04	1.04	1.04	1.04	104	0
NOTULE ACT. 2	*.00	-.13	-.34++	*.20+	*.31++	-.20+	*.00
LONGING	1.56	1.56	1.56	1.56	1.56	104	0
SHATTER	1.00	1.00	1.00	1.00	1.00	104	0
PLANTS HARVEST	*.00	*.27++	*.42++	*.29++	*.02	*.06	*.00
LOGGING	208	208	208	208	208	104	0
SHATTER	1.00	1.00	1.00	1.00	1.00	104	0
PLANTS HARVEST	*.00	1.00	-.20++	*.09	*.00	*.00	*.00
PODS PER PLANT	208	208	208	208	208	104	0
POD HEIGHT	*.00	-.20++	*.00	-.02	-.40++	-.16	*.00
100 SEED WEIGHT	*.00	*.46++	-.40++	-.02	1.00	-.14	*.00
QUALITY OF SEED	*.00	*.19+	-.16	-.04	-.14	*.00	*.00
PERCENT GERM.	*.00	1.04	1.04	1.04	1.04	104	0
PERCENT GERM.	*.00	*.00	*.00	*.00	*.00	*.00	1.00

TABLE 37 COMBINED ANALYSIS OF SOUTH AMERICAN SITES IN ZONE I ISVEX 1978

VARIETY	YIELD KG/HA	DAY TO FLOWER	DAY TO MATURITY	NUDLE ABUND 1	NUDLE ABUND 2	NUDLE ACT. 1	NUDLE ACT. 2	PLANT HEIGHT	LONGING
TUNIA	2844.85	32.96	106.36	3.07	2.64	63.25	66.90	60.44	1.57
UFV 1	2569.69	35.93	103.79	3.11	2.86	59.90	63.20	37.30	1.00
RILLITO	2553.95	31.25	94.96	2.93	2.82	61.05	59.65	54.88	1.32
HARDEE LS	2455.82	42.50	115.36	3.11	2.75	62.00	65.85	66.29	1.68
JUPITER	2431.70	42.57	111.68	3.18	2.86	61.40	71.50	68.34	2.00
IMPROVED FELICAN	2408.16	35.71	102.86	2.86	2.68	64.70	59.50	72.06	1.57
WILLIAMS	2380.84	29.82	91.89	2.93	2.64	60.15	58.60	52.21	1.11
BOSSIER	2371.75	36.75	99.50	2.96	2.86	66.15	69.85	52.96	1.32
TAC 2	2235.17	35.04	107.61	3.21	2.93	62.25	59.40	70.21	1.64
SJ 2	2194.20	36.50	106.64	3.18	3.04	61.00	61.70	69.47	2.25
ORBA	1987.61	35.21	96.25	3.14	2.68	66.40	66.15	65.20	2.50
CARIBE	1919.30	36.54	116.68	2.93	2.54	65.15	68.50	78.62	2.21
GRAND MEAN	2362.75	35.90	104.46	3.05	2.77	62.78	64.23	62.33	1.68
NUMBER EXPERIMENTS CONTRIBUTING	7	7	7	7	7	5	5	7	7
STANDARD ERROR OF VARIETY MEAN	199.98	1.13	2.71	*1.1	*1.3	2.72	3.97	3.34	*20
COEFFICIENT OF VARIATION	44.79%	16.72%	13.74%	18.51%	24.65%	19.34%	27.63%	28.35%	61.88%
5% LSD VARIETY MEANS (*****-NS)	*****NS	3.20	7.66	*****NS	*****NS	*****NS	*****NS	9.43	.56
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ - PROB=.05, - + - PROB=.01)									
YIELD	KG/HA	1.00	*1.64+	*1.84+	-4.94+	-4.34+	-3.84+	-1.15+	*2.94+
DAY TO FLOWER		336	336	336	336	336	240	240	336
DAY TO MATURITY		*1.64+	*1.00	*654+	*214+	*1.14+	*.06	*.08	*204+
NUDLE ABUND 1		336	336	336	336	336	240	240	336
NUDLE ABUND 2		*1.84+	*1.64+	1.00	*264+	*1.64+	*.02	*.05	*164+
NUDLE ACT. 1		*1.64+	*1.214+	*264+	1.00	*754+	*614+	*.514+	*194+
NUDLE ACT. 2		*1.43+	*1.14+	*1.64+	*754+	1.00	*564+	*.604+	*1.74+
PLANT HEIGHT		*2.94+	*.06	*.02	*.614+	*.564+	*1.00	*.794+	*3.36
LONGING		*.05	*1.64+	*.04	*1.94+	*1.74+	*.484+	*.274+	1.00
SHATTER		*1.84+	*1.1	*1.64+	*.05	*514+	*604+	*.06	*.274+
PLANTS HARVEST		*1.74+	*.284+	*.34+	*.284+	*.554+	*454+	*.524+	*.484+
PODS PER PLANT		*1.64+	*254+	*214+	*354+	*274+	*384+	*404+	*144+
POD HEIGHT		*1.74+	*1.54+	*.03	*244+	*144+	*.524+	*.304+	*.564+
100 SEED WEIGHT		*344+	*.07	*1.3+	*244+	*1.64+	*.05	*.07	*.284+
QUALITY OF SEED		*264+	*1.2+	*274+	*10	*.09	*384+	*264+	*1.64+
PERCENT GERM.		*684+	*.10	*1.94+	*10	*.07	*.564+	*.314+	*294+

TABLE 37 COMBINED ANALYSIS OF SOUTH AMERICAN SITES IN ZONE I ISMEX 1978

VARIETY	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
TUNIA	1.04	145.18	39.62	12.01	18.81	2.96	66.00
UFV 1	1.17	140.86	35.77	8.94	18.78	2.54	77.04
RILLITO	1.00	155.25	42.64	7.47	16.94	2.71	71.00
HARDEE LS	1.08	143.46	55.25	11.90	17.38	2.82	64.67
JUPITER	1.00	151.93	40.94	11.87	20.42	2.79	71.04
IMPROVED FELICAN	1.04	183.43	38.93	12.25	16.16	2.36	76.71
WILLIAMS	1.00	187.61	28.15	8.56	19.54	2.39	71.25
BOSSIER	1.00	166.43	34.13	12.21	17.11	2.79	69.17
IAC 2	1.21	144.46	43.06	12.63	17.91	2.86	72.58
SJ 2	1.42	145.50	48.61	11.83	16.26	2.25	83.54
ORBA	2.50	173.82	41.50	11.34	13.86	2.43	91.25
CARIRE	1.54	157.71	43.92	11.91	15.04	3.14	61.75
GRAND MEAN	1.25	157.97	41.04	11.03	17.35	2.67	73.00
NUMBER EXPERIMENTS CONTRIBUTING	6	7	7	7	7	7	6
STANDARD ERROR OF VARIETY MEAN	*20	10.55	3.53	*70	*77	*23	5.68
COEFFICIENT OF VARIATION	78.99%	35.33%	45.55%	33.33%	23.44%	45.26%	38.14%
5% LSD VARIETY MEANS (*****NS)	.57	29.78	9.98	1.97	2.17	*****NS	16.11
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ - PROB=.05, ++ - PROB=.01)							
YIELD	KG/HA	-*.184+	-.174+	*1.64+	*1.74+	*3.44+	*68++
DAYS TO FLOWER		288	336	336	336	336	288
DAYS TO MATURITY		*1.1	-.284+	*.254+	*.154+	*.07	*.10
NODULE ABUND 1		288	336	336	336	336	288
NODULE ABUND 2		*1.64+	-.344+	*.214+	*.03	*.274+	*.194+
NODULE ACT. 1		288	336	336	336	336	288
NODULE ACT. 2		-.07	*.554+	-.354+	*.244+	-.244+	*.10
PLANT HEIGHT		288	336	336	336	336	288
LONGING		240	240	240	240	240	240
SHATTER		1.00	*.01	-.03	*.304+	*.07	*.314+
PLANTS HARVEST		288	288	288	288	288	288
PODS PER PLANT		*.01	1.00	-.644+	*.594+	*.384+	*.564+
POD HEIGHT		288	336	336	336	336	288
100 SEED WEIGHT		288	336	336	*.424+	-.164+	*.294+
QUALITY OF SEED		-.03	-.644+	1.00	-.124+	*.14+	-.134
PERCENT GERM.		*14+	-.194+	*.364+	*.01	*.264+	*.394+

TABLE 38 COMBINED ANALYSIS FOR ZONE II, ISUEX 1978

VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
IMPROVED PELICAN	1722.57	42.33	96.42	3.19	2.69	85.83	60.42	53.24	1.35
BOSSTIER	1641.16	41.79	100.67	2.69	2.50	87.08	48.75	48.78	1.40
WILLIAMS	1588.30	37.42	92.00	2.38	2.13	86.25	36.67	43.29	1.40
COBB	1505.65	38.42	101.71	2.75	2.25	95.42	67.50	36.72	1.30
RILLITO	1320.33	38.29	92.29	2.19	2.13	85.42	37.08	41.97	1.30
GRAND MEAN	1555.60	39.65	96.62	2.64	2.34	88.00	50.08	44.80	1.35
NUMBER EXPERIMENTS CONTRIBUTING	6	6	6	4	4	3	3	6	5
STANDARD ERROR OF VARIETY MEAN	121.94	.55	1.48	.15	.15	3.34	5.97	3.01	.18
COEFFICIENT OF VARIATION	38.40%	6.79%	7.49%	23.26%	25.46%	13.13%	41.28%	32.92%	60.01%
5% LSD VARIETY MEANS (****=NS)	*****	1.62	4.36	.43	.42	*****	19.46	8.88	*****
CORRELATIONS AND NUMBER OF OBSERVATIONS		(+ - PROB=.05, ++ - PROB=.01)							
YIELD	KG/HA	1.00	-.29++	.12	-.21	.38++	.69++	.49++	.31++
DAYS TO FLOWER		120	1.00	.87++	.18	.30+	.74++	-.01	-.32++
DAYS TO MATURITY		120	1.00	.80	.06	-.05	.60	.120	100
NODULE ABUND 1		120	1.00	.80	.06	1.00	.26+	.54++	-.31++
NODULE ABUND 2		80	1.00	.80	.05	.55++	.01	.55++	-.36++
NODULE ACT. 1		80	1.00	.80	.05	.01	.12	.28+	-.61++
NODULE ACT. 2		60	1.00	.60	.05	.01	.12	.60	-.24+
PLANT HEIGHT		60	1.00	.60	.02	-.36++	-.10	.03	1.00
LOGGING		120	1.00	.80	.09	-.24+	-.03	.02	.42++
SHATTER		100	1.00	.80	.15	-.26+	-.46++	.17	.70++
PLANTS HARVEST		100	1.00	.80	.16	-.16	.33++	.03	.49++
PODS PER PLANT		120	1.00	.80	.01	-.31++	.43++	.78++	1.00
POD HEIGHT		120	1.00	.80	.15	-.20	-.34++	-.00	.03
100 SEED WEIGHT		120	1.00	.80	.15	-.24+	.28++	.26+	.37++
QUALITY OF SEED		120	1.00	.80	.11	-.29++	-.10	.16	-.37++
PERCENT GERM.		80	1.00	.80	.19	-.19	.14	.11	-.10

TABLE 38 COMBINED ANALYSIS FOR ZONE II, ISUEX 1978

VARIETY OR CROSS	SHATTER	PLANTS HARVEST	FOD PER PLANT	FOD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
IMPROVED PELICAN	1.30	253.63	21.16	7.59	14.47	1.96	83.25
BOSSIER	1.25	225.00	17.10	7.42	15.88	2.42	60.13
WILLIAMS	1.50	236.79	15.04	6.32	20.12	2.38	74.00
COBB	1.45	244.17	15.42	5.86	17.63	2.63	58.50
RILLITO	1.30	212.04	18.97	5.11	15.53	2.79	61.31
GRAND MEAN	1.36	234.33	17.54	6.46	16.73	2.43	67.44
NUMBER EXPERIMENTS CONTRIBUTING	5	6	5	5	6	6	4
STANDARD ERROR OF VARIETY MEAN	.12	10.77	1.41	.30	.42	.29	7.23
COEFFICIENT OF VARIATION	38.38%	22.51%	39.4%	20.67%	12.40%	58.22%	42.86%
5% LSD VARIETY MEANS (**NS=NS)	*****	*****	4.16	.89	1.25	*****	*****
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ - PROB=.05, ++ - PROB=.01)							
YIELD KG/HA	.48++	*37++	.30++	-.05	.07	-.17	*69++
DAYS TO FLOWER	-.23+	-.01	.24++	*81++	*34++	-.24++	*69++
DAYS TO MATURITY	100	120	120	100	120	120	80
NODULE ABUND 1	-.15	-.16	.28++	*70++	*35++	-.29++	*11
NODULE ABUND 2	-.26+	.45++	-.20	120	100	120	80
NODULE ACT. 1	60	80	80	60	60	60	60
NODULE ACT. 2	.32+	.78++	.26+	*54++	*17	*.37++	*68++
PLANT HEIGHT	*70++	*03	*37++	*24+	-.31++	*16	-.19
LODGING	*49++	-.12	*18	*17	*11	-.06	*26+
SHATTER	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PLANTS HARVEST	-.03	1.00	-.31++	*48++	-.01	*29++	*49++
FOD PER PLANT	*29++	-.31++	1.00	.10	*03	-.49++	*48++
FOD HEIGHT	-.17	*48++	*10	1.00	1.00	1.00	1.00
100 SEED WEIGHT	*17	-.01	*03	*23+	1.00	-.15	*25+
QUALITY OF SEED	-.26++	*29++	-.49++	-.07	-.15	1.00	-.61++
PERCENT GERM.	100	120	120	100	120	120	80
	.56++	*49++	*48++	*47++	*25+	-.61++	1.00
	80	80	80	80	80	80	80

TABLE 39 COMBINED ANALYSIS FOR ZONE III, ISVEX 1978

VARIETY	YIELD KG/HA	DAY TO FLOWER	DAY TO MATURITY	ODULE ABUND 1	ODULE ABUND 2	ODULE ACT. 1	ODULE ACT. 2	PLANT HEIGHT	LONGING
HARDEE LS	2883.78	65.40	133.40	3.13	2.42	78.33	76.67	59.75	2.47
IMPROVED FELICAN	2619.69	57.35	118.20	3.44	2.58	72.25	80.42	61.27	1.92
JUPITER	2584.68	64.55	133.20	3.44	3.08	73.58	84.58	72.16	2.33
SJ 2	2496.75	56.45	122.10	3.38	2.50	85.00	75.42	62.24	2.58
CH 3	2355.89	53.70	127.00	3.25	2.33	76.75	77.08	76.48	2.48
ORBA	2287.12	52.05	115.10	2.81	2.33	78.42	75.83	67.69	3.00
UFV 1	2274.62	54.25	121.60	3.19	2.42	77.42	79.58	35.25	1.17
TAC 2	2252.12	54.25	123.10	3.38	2.17	78.92	86.25	63.48	2.58
BOSSIER	2224.61	52.55	110.15	3.00	2.33	82.25	72.92	43.31	1.67
WILLIAMS	1946.22	44.05	100.50	2.81	2.42	82.25	90.83	34.67	1.33
GRAND MEAN	2392.55	56.16	120.44	3.18	2.46	78.52	79.96	57.63	2.45
NUMBER EXPERIMENTS CONTRIBUTING	5	5	5	4	3	3	3	5	3
STANDARD ERROR OF VARIETY MEAN	235.31	2.03	2.25	1.7	1.6	8.39	7.75	3.09	.50
COEFFICIENT OF VARIATION	43.98%	16.16%	8.36%	20.89%	22.45%	37.04%	33.56%	24.02%	80.29%
5% LSD VARIETY MEANS (**NS=NS)	*****	5.82	6.46	*****	*****	*****	*****	8.89	*****
CORRELATIONS AND NUMBER OF OBSERVATIONS	(+ = PROB=.05, -+ = PROB=.01)								
YIELD	KG/HA	1.00	-.13	-.12	-.07	-.31++	-.20+	-.43++	.04
DAY TO FLOWER		.200	.200	.160	.160	.120	.120	.200	.120
DAY TO MATURITY		-.13	1.00	.95++	.57++	.83++	.13	.25++	-.32++
ODULE ABUND 1		.200	.200	.160	.160	.120	.120	.200	.120
ODULE ABUND 2		-.12	.95++	1.00	.61++	.83++	.09	.29++	-.31++
ODULE ACT. 1		.200	.200	.160	.160	.120	.120	.200	.120
ODULE ACT. 2		-.07	.57++	.61++	1.00	.78++	-.27++	-.29++	-.57++
PLANT HEIGHT		.160	.160	.160	.160	.120	.120	.160	.120
PLANT LENGTH		-.31++	.83++	.78++	.78++	1.00	-.05	.00	-.43++
PLANTS HARVEST		.120	.120	.120	.120	.120	.120	.120	.120
PLANTS PER PLANT		-.03	.13	.09	.11	-.17+	-.16	.05	-.02
FOD HEIGHT		-.20+	.34++	.34++	.34++	-.17+	-.16	.05	-.02
FOD LONGING		.04	-.32++	.29++	.29++	-.29++	.00	.27++	.18
SHATTER		-.18+	-.18+	-.20+	-.24+	-.22+	-.02	.09	.14
PLANTS HARVEST		-.03	-.39++	-.49++	-.37++	-.48++	.08	-.02	.00
100 SEED WEIGHT		.200	.200	.200	.160	.120	.120	.200	.120
QUALITY OF SEED		.45++	-.13	-.12	-.49++	-.54++	.05	.03	.51++
PERCENT GERM.		.22+	-.27++	-.28++	-.35++	-.23+	.07	-.17	.73++
		.120	1.20	1.20	1.20	1.20	1.20	1.20	1.20

TABLE 39 COMBINED ANALYSIS FOR ZONE III, ISUEX 1978

VARIETY	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
HARDEE LS	1.00	175.25	42.73	14.78	16.54	2.00	91.17
IMPROVED PELICAN	1.00	239.15	31.83	13.10	15.57	1.63	99.58
JUPITER	1.00	184.50	31.81	21.45	20.47	2.88	96.75
SJ 2	1.00	195.10	35.54	14.28	14.03	1.94	99.25
CH 3	1.00	205.20	34.07	14.90	14.71	2.38	98.83
ORBA	2.17	218.15	30.64	15.05	15.06	2.13	99.25
UFV 1	1.00	176.65	31.88	7.62	18.54	2.19	99.17
IAC 2	1.00	223.25	31.16	11.53	19.33	2.50	98.67
ROSSIER	1.00	200.30	25.23	12.13	16.40	2.13	98.08
WILLIAMS	1.00	234.60	18.15	5.77	20.98	2.25	97.08
GRAND MEAN	1.12	205.22	31.30	13.06	17.16	2.20	97.78
NUMBER EXPERIMENTS CONTRIBUTING	3	5	5	3	4	4	3
STANDARD ERROR OF VARIETY MEAN	*29	14.99	2.64	1.41	1.14	.32	1.87
COEFFICIENT OF VARIATION	91.03%	32.66%	37.67%	37.40%	26.53%	58.89%	6.61%
5% LSD VARIETY MEANS (**NS=NS)	*****NS	42.99	7.56	4.19	3.30	*****NS	*****NS
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ = PROB=.05, ++ = PROB=.01)							
YIELD KG/HA	-*.18+	-.03	.45++	*22+	*.01	-.34++	-.08
DAYS TO FLOWER	-.18+	.200	.200	120	160	1.20	1.20
DAYS TO MATURITY	-.20+	-.39++	-.13	-.27++	.19+	.25++	-.27++
NODULE ABUND 1	-.24++	-.49++	-.12	-.28++	120	160	1.20
NODULE ABUND 2	-.22+	-.37++	-.20	-.28++	*22++	.32++	-.14
NODULE ACT. 1	-.02	-.49++	-.20	-.28++	120	160	1.20
NODULE ACT. 2	-.09	-.01	.160	-.35++	*35++	.26++	-.05
PLANT HEIGHT	.14	-.48++	-.54++	-.23+	120	160	1.20
LOGGING	.46++	-.48++	-.54++	-.23+	*33++	.44++	-.07
SHATTER	1.00	1.20	1.20	1.20	120	120	.80
PLANTS HARVEST	1.3	1.00	*.43++	*73++	*26++	.02	.01
PODS PER PLANT	1.13	1.20	1.20	1.20	120	120	.80
100 SEED WEIGHT	1.13	-.28++	1.00	*48++	*37++	-.19+	.18
QUALITY OF SEED	-.05	1.20	1.20	1.20	120	120	.80
PERCENT GERM.	.10	*.06	-.03	-.03	120	120	.80

TABLE 40 COMBINED ANALYSIS FOR AFRICAN SITES IN ZONE III, ISSUE 1978

VARIETY	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1		NODULE ABUND 2		NODULE ACT. 1		NODULE ACT. 2		PLANT HEIGHT	LOGGING
				NODULE ABUND	ABUND	NODULE ABUND	ABUND	NODULE ABUND	ABUND	NODULE ABUND	ABUND		
WILLIAMS	2315.05	41.67	333.75	3.17	2.88	87.50	73.75	38.43	1.58	38.43	1.58	1.58	1.58
MITCHELL	2296.07	41.67	332.83	3.92	3.13	93.75	79.38	44.29	1.50	44.29	1.50	1.50	1.50
RILLITO	2267.67	46.00	436.92	3.25	3.13	88.33	82.50	54.86	1.83	54.86	1.83	1.83	1.83
DAVIS	2251.44	52.33	457.67	3.42	3.25	93.33	85.00	59.37	1.83	59.37	1.83	1.83	1.83
CALLAND	2163.67	42.25	359.50	3.58	3.13	91.67	80.63	45.69	1.42	45.69	1.42	1.42	1.42
RANSOM	2139.43	42.67	421.92	3.17	3.00	84.58	80.63	36.63	1.00	36.63	1.00	1.00	1.00
CUTLER 71	2110.03	41.67	359.67	3.17	3.25	88.33	76.88	49.80	1.83	49.80	1.83	1.83	1.83
BOSSIER	2088.78	53.67	374.58	3.42	3.00	80.83	78.13	65.04	2.25	65.04	2.25	2.25	2.25
FORREST	2085.42	47.58	367.92	4.33	3.50	87.92	80.63	54.63	1.58	54.63	1.58	1.58	1.58
JAMES	2029.91	43.67	343.50	3.25	3.13	95.00	90.63	52.68	1.75	52.68	1.75	1.75	1.75
BRAGG	1661.31	44.17	415.67	4.00	3.38	95.83	91.88	46.92	1.50	46.92	1.50	1.50	1.50
IMPROVED PELICAN	1489.17	65.67	489.17	4.33	3.50	93.75	64.38	88.00	2.67	88.00	2.67	2.67	2.67
FRANKLIN	1439.36	41.42	345.17	3.92	3.38	84.17	77.50	39.79	1.00	39.79	1.00	1.00	1.00
GASOY 17	1329.10	42.75	336.17	3.67	3.13	85.42	93.75	38.66	1.33	38.66	1.33	1.33	1.33
GRAND MEAN	1976.17	46.23	383.89	3.61	3.20	89.32	81.12	51.06	1.65	51.06	1.65	1.65	1.65
NUMBER EXPERIMENTS CONTRIBUTING	4	3	3	3	2	3	3	2	3	2	3	3	3
STANDARD ERROR OF VARIETY MEAN	187.42	2.42	45.30	*.29	*.19	2.48	8.05	3.49	.30	3.49	.30	.30	.30
COEFFICIENT OF VARIATION	37.94%	18.12%	40.88%	27.43%	16.64%	9.61%	28.07%	27.36%	62.01%	27.36%	62.01%	62.01%	62.01%
5% LSD VARIETY MEANS (**NS=NS)	536.12	7.03	*****	.83	*****	6.93	*****	9.99	.86	9.99	.86	.86	.86
CORRELATIONS AND NUMBER OF OBSERVATIONS				(+- PROB=.05, ++ - PROB=.01)									
YIELD	KG/HA	1.00	*1.6+	-*.46++	*23++	-.51++	*30++	-.18	*.02	*21++			
DAYS TO FLOWER		224	1.68	1.68	1.68	1.12	1.68	1.12	1.12	224	1.68		
DAYS TO MATURITY		*1.6+	1.00	-.54++	*33++	*40++	-.12	-.11	-.11	*66++	1.12		
NODULE ABUND 1		168	1.68	1.00	*43++	*67++	-.23+	-.02	-.02	-.26++	1.12		
NODULE ABUND 2		168	1.68	1.68	1.12	1.12	1.12	1.12	1.12	1.12	1.12		
NODULE ACT. 1		1.68	1.12	*43++	1.00	*58++	*40++	*.01	*.01	*46++	1.12		
NODULE ACT. 2		*1.8	-.11	-.02	*1.12	1.68	1.12	1.68	1.12	1.68	1.12		
PLANT HEIGHT		1.12	1.12	1.12	*67++	*58++	1.00	*.29++	*.15	*26++	1.12		
PLANTS HARVEST		*.02	*.83++	*.26++	*.07	1.12	1.12	1.12	1.12	1.12	1.12		
PODS PER PLANT		224	1.68	1.68	*40++	-.29++	1.00	-.14	-.14	*22++	1.12		
SHATTER		*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	1.12		
PLANTS HARVEST		*48++	*33++	-.64++	*68++	*1.3	*40++	-.10	-.06	*50++	1.12		
LOGGING		*.21++	*.66++	-.57++	*46++	*.03	*16	*.19	*.19	*50++	1.12		
SHATTER		168	1.12	1.12	1.12	1.12	1.12	1.12	1.12	56	1.12		
PLANTS HARVEST		1.12	56	56	56	0	56	0	0	*.00	1.12		
PODS PER PLANT		*.13+	*.47++	-.11	-.53++	*31++	-.35++	-.19+	-.19+	*42++	1.12		
QUALITY OF SEED		224	1.68	1.68	1.68	1.12	1.68	1.12	1.12	224	1.12		
PERCENT GERM.		1.12	*.13	*.13	*.77++	*.28++	*.68++	*.07	-.04	*.61++	1.12		
100 SEED WEIGHT		*21++	-.34++	*.08	*47++	-.05	*23++	*.45++	-.07	*.45++	1.12		
QUALITY OF SEED		*.34++	-.04	*.17	-.07	*.18	-.08	-.03	*.15	*.42++	1.12		
PERCENT GERM.		*.18	*.13	*.10	*.13	-.09	-.05	-.01	*.04	*.37++	1.12		

TABLE 40 COMBINED ANALYSIS FOR AFRICAN SITES IN ZONE III, ISVEX 1978

VARIETY	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
SHATTER						
WILLIAMS	1.00	221.81	19.33	4.89	18.80	2.08
MICHELL	1.00	191.31	25.61	5.09	17.28	2.08
FILLITO	1.00	176.81	28.71	5.69	16.63	2.08
DAVIS	1.00	203.00	28.66	7.74	17.04	1.50
CALLAND	1.00	230.06	24.69	5.25	18.84	3.00
RANSOM	1.00	218.31	22.38	5.61	18.49	2.50
CUTLER 71	1.00	233.44	25.73	5.19	18.29	3.33
BOSSTER	1.00	175.63	31.34	9.03	16.88	2.75
FORREST	1.00	179.63	27.36	5.79	18.08	2.75
JAMES	1.00	239.13	24.39	6.38	18.03	2.58
BRAGG	1.00	210.63	16.78	6.66	19.75	2.67
IMPROVED FELICAN	1.00	214.81	33.66	11.79	14.96	3.25
FRANKLIN	1.00	232.56	21.40	4.43	15.62	2.42
GASOY 17	1.00	188.19	18.55	4.92	19.97	1.67
GRAND MEAN	1.00	208.24	24.90	6.32	17.76	2.48
NUMBER EXPERIMENTS CONTRIBUTING	2	4	4	3	4	3
STANDARD ERROR OF VARIETY MEAN	.00	11.60	2.45	1.23	.78	.55
COEFFICIENT OF VARIATION	.00%	22.28%	39.31%	67.51%	17.46%	77.54%
5% LSD VARIETY MEANS (**NS=NS)	.00	33.18	7.00	3.58	2.22	*****
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ - PROB=.05, ++ - PROB=.01)						
YIELD KG/HA	.00	*48++	-.13+	-.24++	*21++	-.34++
DAYS TO FLOWER	1.12	224	224	1.63	.224	1.68
DAYS TO MATURITY	.00	*33++	*47++	*65++	*34++	-.04
NODULE ABUND 1	5.6	1.68	1.68	1.12	1.68	1.12
NODULE ABUND 2	.00	*64++	-.11	*77++	*.08	*.17
NOTULE ACT. 1	0.0	1.68	1.68	1.12	1.68	1.12
NOTULE ACT. 2	*.00	*.68++	-.53++	*.28++	*.47++	-.07
PLANT HEIGHT	.00	*1.3	*1.3	*31++	*.68++	*.13
LOGGING	1.12	1.12	1.12	1.12	1.12	1.12
SHATTER	1.00	*0.0	*.02	*.42++	*.61++	*.05
PLANTS HARVEST	*.00	*42++	224	1.68	*23++	*.08
PODS PER PLANT	1.12	*.46++	-.07	*.60++	*.07	-.03
POD HEIGHT	1.12	1.00	*.46++	*.60++	*.67++	*.01
100 SEED WEIGHT	5.6	1.68	1.68	1.12	1.68	1.12
QUALITY OF SEED	*.00	*.58++	1.00	*.07	*.67++	*.15
PERCENT GERM.	*.00	*.20+	*.224	1.68	*.224	1.68

TABLE 41 COMBINED ANALYSIS OF SITES IN ZONE IV FOR ISVEX 1978

VARIETY	YIELD KG/HA	DAYS TO FLOWER	DAYS TO Maturity	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
TUNIA	2572.59	39.00	105.67	38.44	55.33	88.88	85.33	57.62	1.25
BOSSIER	2526.12	37.83	94.24	40.88	72.83	86.44	81.50	47.23	1.71
UEV 1	2223.37	40.96	103.54	43.50	62.92	79.44	80.75	36.87	1.08
HARDEE L.S.	2219.36	48.46	111.38	121.94	167.25	68.50	77.42	51.13	1.33
JUPITER	2210.34	46.38	110.67	56.50	83.08	82.94	81.00	60.60	1.58
IMPROVED FELICAN	2179.27	39.92	100.42	36.00	52.17	83.88	75.25	67.15	1.96
JAC 2	2051.63	42.75	106.00	63.69	104.67	82.44	77.42	70.07	2.42
WILLIAMS	2024.42	30.88	88.83	55.88	88.25	80.00	82.83	41.22	1.25
ORBA	1996.25	40.75	94.96	28.44	45.42	78.69	79.00	67.80	2.29
CARIBE	1824.80	43.08	115.08	38.38	66.33	84.50	80.25	72.23	2.33
SJ 2	1777.88	43.21	96.87	39.25	53.17	82.63	84.58	57.82	1.46
GRAND MEAN	2146.00	41.20	102.51	51.17	77.43	81.66	80.48	57.25	1.70
NUMBER EXPERIMENTS CONTRIBUTING	6	6	6	4	3	4	3	6	6
STANDARD ERROR OF VARIETY MEAN	216.24	1.72	3.63	25.82	34.89	3.10	3.16	3.80	.29
COEFFICIENT OF VARIATION	49.36%	20.50%	17.34%	201.86%	156.71%	15.21%	13.60%	32.51%	82.31%
5% LSD VARIETY MEANS (**NS=NS)	*****NS	4.90	10.31	*****NS	*****NS	9.97	*****NS	10.79	.81
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ = FROB=.05, ++ = PROB=.01)									
YIELD	KG/HA	1.00	.05	.24++	-.51++	-.51++	.55++	.61++	.06
DAYS TO FLOWER		264	264	264	176	132	176	132	.64
DAYS TO Maturity		.05	1.00	.68++	-.02	.18+	.05	.23++	.01
NODULE ABUND 1		264	264	264	176	132	176	132	.64
NODULE ABUND 2		.24++	.68++	1.00	-.21++	-.28++	.30++	.37++	.05
NODULE ACT. 1		264	264	264	176	132	176	132	.64
NODULE ACT. 2		-.51++	-.02	-.21++	1.00	.99++	.78++	-.79++	-.02
PLANT HEIGHT		176	176	176	176	132	176	132	.76
PLANT WEIGHT		.51++	-.18+	-.28++	.99++	1.00	-.83++	-.83++	.04
LOGGING		.55++	.05	-.30++	-.78++	-.83++	1.00	.95++	.07
SHATTER		176	176	176	176	132	176	132	.32
PLANTS HARVEST		176	176	176	176	132	176	132	.32
FOLIUM PER PLANT		.06	.01	-.05	-.02	.04	.00	-.10	.00
POD HEIGHT		264	264	264	264	176	176	132	.64
100 SEED WEIGHT		264	264	264	176	132	176	132	.64
QUALITY OF SEED		-.33++	.02	.05	.08	-.03	.04	.02	.08
PERCENT GERM.		176	176	176	176	132	176	132	.64

TABLE 41 COMBINED ANALYSIS OF SITES IN ZONE IV FOR TSVEX 1973

VARIETY	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
TUNIA	1.46	155.71	45.13	9.49	17.25	2.31	65.25
BOSSIER	1.17	179.29	39.13	9.26	15.56	1.75	55.75
UFU 1	1.08	152.83	38.96	7.18	15.09	1.94	69.83
HARDEE L. S.	1.08	134.17	53.38	9.20	13.92	2.19	60.25
JUPITER	1.13	150.04	46.63	9.73	14.86	1.88	67.83
IMPROVED FELICAN	1.50	193.92	41.23	10.56	13.31	1.94	78.17
JAC 2	1.29	160.75	52.99	11.59	14.77	1.94	63.25
WILLIAMS	1.42	213.04	27.83	6.43	17.33	2.00	43.83
OREA	1.92	162.46	43.81	10.46	12.74	1.88	82.08
CARIBE	1.04	152.79	57.89	10.18	11.65	2.00	52.75
SJ 2	1.38	146.21	65.71	9.86	12.82	2.31	80.67
GRAND MEAN	1.31	163.75	46.61	9.45	14.48	2.01	65.42
NUMBER EXPERIMENTS CONTRIBUTING	6	6	6	4	5	4	3
STANDARD ERROR OF VARIETY MEAN	*1.6	9.78	6.29	*7.7	*6.3	*3.1	9.89
COEFFICIENT OF VARIATION	59.84%	29.25%	66.14%	32.66%	19.41%	61.66%	52.38%
5% LSD VARIETY MEANS (**NS=NS)	.46	27.78	17.87	2.23	1.80	*****	*****
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ = PROB=.05, +4 = PROB=.01)							
YIELD KG/HA	-*.334+	*.234+	*.01	*.304+	*.184+	-.404+	-.02
DAYS TO FLOWER	.264	.264	.264	.176	.220	.176	.132
DAYS TO MATURITY	.02	-.06	-.04	*.514+	-.04	-.04	*.244+
NODULE ABUND 1	.264	.264	.264	.176	.220	.176	.132
NODULE ABUND 2	*.05	*.214+	*.11	*.484+	*.164+	-.01	-.324+
NODULE ACT. 1	.264	.264	.264	.176	.220	.176	.132
NODULE ACT. 2	.08	*.334+	*.194	*.344+	*.344+	*.264+	*.324+
PLANT HEIGHT	1.76	1.76	1.76	.176	.132	.132	.093
LOGGING	-.02	*.674+	*.494+	-.514+	*.374+	*.254+	*.314+
SHATTER	1.32	1.32	1.32	.132	.132	.132	.083
PLANTS HARVEST	-.04	*.454+	*.164+	*.484+	*.424+	-.314+	-.344+
PODS PER PLANT	1.76	1.76	1.76	.176	.132	.132	.083
POD HEIGHT	1.76	1.76	1.76	.176	.132	.132	.083
QUALITY OF SEED	1.76	1.76	1.76	.176	.132	.132	.083
PERCENT GERM.	-.13	*.134+	*.03	*.284+	*.16	*.274+	*.274+

TABLE 42 COMBINED ANALYSIS OF SITES IN ZONE VI FOR ISVEX 1978

VARIETY	YIELD KG/HA	DAYS TO FLOWER	DAYS TO Maturity	NODULE ABUND. 1	NODULE ABUND. 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
FORREST	3035.04	37.40	108.44	3.63	3.25	68.13	71.88	52.54	1.44
DAVIS	2934.62	42.95	111.88	4.00	2.50	83.13	83.13	54.93	1.50
BOSSIER	2797.76	44.90	115.38	3.88	2.25	71.88	68.13	59.78	2.63
RANSOM	2791.38	33.50	104.50	3.75	2.63	72.50	78.13	37.60	1.06
GASDY 17	2683.10	32.80	102.31	3.88	2.75	78.75	79.38	37.57	1.13
MITCHELL	2616.96	28.70	95.94	3.88	2.75	67.50	61.88	48.81	1.31
CRAWFORD	2593.25	29.75	97.94	3.75	2.75	71.88	77.50	49.96	1.13
JAMES	2469.99	30.65	100.38	3.50	2.25	83.75	78.75	46.70	1.31
CUTLER 71	2433.09	29.60	96.38	3.63	2.50	76.88	75.00	48.64	1.13
CALLAND	2262.03	27.95	99.88	3.50	2.88	81.25	81.88	42.92	1.25
WILLIAMS	2157.91	28.40	92.75	3.63	2.50	67.50	55.63	38.90	1.00
IMP. PELICAN	2123.77	50.55	119.56	3.88	2.39	71.25	81.88	61.77	2.69
FRANKLIN	2010.18	28.40	92.88	3.63	3.00	71.88	66.25	42.30	1.06
GRAND MEAN	2531.47	34.27	102.94	3.73	2.64	74.33	73.80	49.41	1.43
NUMBER EXPERIMENTS CONTRIBUTING	5	5	4	2	2	2	2	5	4
STANDARD ERROR OF VARIETY MEAN	142.25	1.80	3.09	*1.4	*4.1	5.72	7.05	4.72	*3.3
COEFFICIENT OF VARIATION	25.13%	23.49%	12.00%	10.94%	44.01%	21.77%	27.00%	42.75%	93.14%
5% LSD VARIETY MEANS (*****NS)	404.50	5.12	8.86	*****NS	*****NS	*****NS	*****NS	13.43	.96
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ = PROB=.05, ++ = PROB=.01)									
YIELD	KG/HA	1.00	*.46++	*.44++	-.02	.06	.24+	*.394+	.06
DAYS TO FLOWER		260	260	208	104	104	104	260	208
DAYS TO Maturity		*.46++	1.00	*.87++	*.41++	*.24+	*.29++	*.71++	*.63++
NODULE AEUND 1		260	260	208	104	104	104	260	208
NODULE AEUND 2		*.44++	*.87++	1.00	*.48++	*.34++	*.62++	*.72++	*.54++
NODULE ACT. 1		208	208	208	104	104	104	208	208
NODULE ACT. 2		-.02	*.41++	*.48++	1.00	-.31++	-.52++	*.48++	*.24+
PLANT HEIGHT		104	104	104	104	104	104	104	104
LODGING		*.41++	*.24+	-.29++	-.45++	*.48++	*.40++	-.24+	-.10
SHATTER		*.06	*.24+	*.104	-.34++	-.31++	1.00	*.42++	-.10
PLANTS HARVEST		104	104	104	104	104	104	104	104
PODS PER PLANT		*.08	*.24+	*.104	-.39++	*.71++	*.29++	*.32+	*.32++
POD HEIGHT		*.16+	*.25++	*.26++	*.62++	*.26++	-.10	*.09	*.43++
100 SEED WEIGHT		260	260	208	104	104	104	52	52
QUALITY OF SEED		*.07	-.28++	-.07	-.32++	-.40++	*.42++	104	104
PERCENT GERM.		*.47++	*.31++	*.05	-.41++	-.61++	*.47++	*.76++	*.20++

TABLE 42 COMBINED ANALYSIS OF SITES IN ZONE VI FOR ISVEX 1970

VARIETY	PLANTS HARVEST	FODS PER PLANT	FOD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
SHATTER						
FORREST	1.00	213.75	26.73	7.06	17.16	3.00
DAVIS	1.13	228.15	25.11	8.34	19.13	2.39
BOSSIER	1.13	207.55	25.05	10.55	17.86	2.70
RANSOM	1.00	230.35	20.32	7.33	20.06	2.75
GASOY 17	1.13	242.50	20.33	6.63	19.22	2.20
MITCHELL	1.00	216.15	20.03	6.96	19.30	2.55
CRAWFORD	1.00	207.10	21.99	6.37	20.20	2.25
JAMES	1.25	249.60	15.85	8.88	20.28	2.20
CUTLER 74	1.00	245.25	18.31	7.91	21.07	2.65
CALLAND	1.38	241.10	14.54	8.84	20.96	2.75
WILLIAMS	1.00	261.10	15.09	7.46	19.88	2.70
IMP. PELICAN	1.50	246.25	30.86	12.74	15.14	2.90
FRANKLIN	1.00	226.60	27.62	6.38	18.85	2.75
GRAND MEAN	1.12	231.96	21.69	8.27	19.16	2.59
NUMBER EXPERIMENTS CONTRIBUTING	1.2	5	5	5	5	5
STANDARD ERROR OF VARIETY MEAN	.17	10.69	3.69	.73	.45	.26
COEFFICIENT OF VARIATION	41.86%	20.62%	76.07%	39.63%	10.45%	4.31%
5% LSD VARIETY MEANS (*****NS)	*****NS	30.41	*****NS	2.08	1.27	*****NS
CORRELATIONS AND NUMBER OF OBSERVATIONS ($+/-$ PROB=.05, $++/-$ PROB=.01)						
YIELD KG/HA						
1.83	.08	.31++	.16+	.28++	.61++	.07
DAYS TO FLOWER	1.04	260	260	260	260	.47++
DAYS TO MATURITY	.47++	.05	.25++	.07	.13+	.31++
NODULE ABUND 1	.52	104	104	104	104	.10
NODULE ABUND 2	.07	.47++	.10	.42++	.04	.43++
NODULE ACT. 1	.52	104	104	104	104	.04
NODULE ACT. 2	.09	.76++	.29++	.66++	.39++	.04
PLANT HEIGHT	.52	104	104	104	104	.04
LOGGING	.32+	.72++	.15	.69++	.29++	.04
SHATTER	1.00	.22+	.44++	.15	.12	.36++
PLANTS HARVEST	1.04	.22+	.104	.104	.104	.04
FODS PER PLANT	1.04	.44++	.27++	.30++	.42++	.03
FOD HEIGHT	.15	.30++	.10	.00	.02	.27++
100 SEED WEIGHT	1.04	.22+	.260	.260	.260	.260
QUALITY OF SEED	.36++	.08	.06	.03	.09	.25++
PERCENT GERM.	.23	.35++	.14	.36++	.53++	.08
	52	156	156	156	156	156

TABLE 43 COMBINED ANALYSIS FOR ZONE VII, TSUEX 1978

VARIETY	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NOODLE ABUND 1	NOODLE ABUND 2	NOODLE ACT. 1	NOODLE ACT. 2	PLANT HEIGHT	LONGING
RILLITO	2474.09	45.97	128.06	7.00	66.46	88.75	66.12	80.27	1.69
RANSOM	2150.50	44.00	132.22	7.31	91.63	88.75	60.62	50.22	1.06
DAVIS	2119.33	51.41	131.44	5.81	79.96	86.25	63.40	60.26	1.28
IMPROVED PELICAN	2058.17	67.66	138.59	5.94	69.63	85.83	305.49	108.88	2.38
GASOY 17	2015.27	46.88	135.03	5.69	43.25	81.67	63.13	57.58	1.25
ROSSITER	1982.19	50.03	139.47	7.81	44.88	76.67	309.60	68.81	1.53
MITCHELL	1831.24	32.13	106.16	6.00	58.50	84.58	64.56	57.66	1.19
CALLAND	1661.47	29.19	102.25	6.00	39.38	83.75	61.38	54.61	1.06
CUTLER 71	1579.25	31.25	101.25	6.81	41.17	82.50	57.21	53.19	1.19
FRANKLIN	1566.57	30.13	101.53	6.06	40.21	85.00	55.25	53.98	1.06
WILLIAMS	1559.55	30.13	100.53	9.25	51.21	86.67	62.55	50.16	1.13
FORREST	1503.93	44.89	123.44	5.75	45.75	82.92	56.10	51.11	1.09
GRAND MEAN	1875.13	41.97	120.00	6.54	56.00	84.44	102.12	62.22	1.33
NUMBER EXPERIMENTS CONTRIBUTING	8	8	8	4	6	3	4	3	8
STANDARD ERROR OF VARIETY MEAN	176.40	2.99	4.00	.95	17.07	3.32	101.89	4.19	.17
COEFFICIENT OF VARIATION	53.222	40.322	18.862	.58	37%	1.49	399.07%	38.11%	72.50%
5% LSD VARIETY MEANS (*****=NS)	496.76	8.42	11.27	*****	*****	*****	*****	1.80	.48
CORRELATIONS AND NUMBER OF OBSERVATIONS (4 = PROB=.05, 4+ = PROB=.01)									
YIELD	KG/HA	1.00	.324+	.314+	.294+	.504+	.434+	.00	.264+
DAYS TO FLOWER		384	384	384	192	288	144	192	384
DAYS TO MATURITY			1.00	.744+	.414+	.544+	.07	.234+	.724+
NOODLE ABUND 1				.314+	.744+	.192	.288	144	.384
NOODLE ABUND 2					.314+	.374+	.554+	.07	.404+
NOODLE ACT. 1						.384	.288	.144	.384
NOODLE ACT. 2							.374+	.654+	.254+
PLANT HEIGHT								.144	.192
LONGING									.03
SHATTER									.192
PLANTS HARVEST									.394+
PODS PER PLANT									.288
POD HEIGHT									.192
100 SEED WEIGHT									.144
QUALITY OF SEED									.144
PERCENT GERM.									.144

TABLE 43 COMBINED ANALYSIS FOR ZONE VII, ISUEX 1973

VARIETY	SHATTER	PLANTS HARVEST	FODS PER PLANT	HEIGHT	FOD	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
RILLITO	1.00	152.53	53.09	11.74	15.33	2.07	76.65	
RANSOM	1.00	179.34	34.38	10.00	17.95	2.11	72.40	
DAVIS	1.13	174.44	38.99	10.44	16.91	2.04	71.95	
IMPROVED PELICAN	1.25	178.09	57.81	14.64	13.03	1.82	77.60	
GASOY 17	1.11	174.47	48.02	9.91	16.81	2.50	80.10	
BOSSIER	1.29	162.28	47.99	12.34	15.79	2.36	78.50	
MITCHELL	1.18	164.69	31.52	9.20	16.81	2.96	50.50	
CALLAND	1.21	195.44	28.11	9.24	17.02	3.14	62.65	
CUTLER 71	1.18	182.31	27.27	9.65	17.30	2.57	58.20	
FRANKLIN	1.18	180.34	26.33	9.24	16.24	2.71	50.05	
WILLIAMS	1.29	187.78	26.21	7.76	16.23	2.39	63.50	
FORREST	1.00	160.66	38.30	9.13	15.40	3.04	70.60	
GRAND MEAN	1.15	174.28	38.17	10.27	16.24	2.48	67.73	
NUMBER EXPERIMENTS CONTRIBUTING	7	8	7	7	7	7	5	
STANDARD ERROR OF VARIETY MEAN	*1.3	7.81	3.59	*67	*64	*35	6.89	
COEFFICIENT OF VARIATION	57.41%	25.32%	49.72%	34.68%	20.75%	74.85%	45.47%	
5% LSD VARIETY MEANS (*****=NS)	*****=NS	*****=NS	22.01	10.13	1.90	1.80	*****=NS	19.63
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ = PROB=.05, ++ = PROB=.01)								
YIELD	KG/HA	-*.27++	-.07	*51++	*31++	*10	-.29++	-.02
SHATTER		336	384	336	336	336	336	240
DAYS TO FLOWER		-1.14++	-.09	*61++	*44++	-.14+	-.18++	,32++
DAYS TO MATURITY		336	384	336	336	336	336	240
NOTULE ABUND 1		-1.10	*06	*47++	*60++	*18++	*18++	,25++
NOTULE ABUND 2		336	384	336	336	336	336	240
NOTULE ACT. 1		-1.27++	.45++	-.18+	-.12	*06	-.02	,31++
NOTULE ACT. 2		1.44	1.92	1.44	1.92	1.44	1.44	1.44
PLANT HEIGHT		-1.66	*15++	*45++	*06	*00	-.03	,44++
LONGING		240	288	240	288	240	240	192
SHATTER		336	384	336	336	336	336	240
PLANTS HARVEST		*1.00	-.24++	*38++	*38++	*50++	*36++	,33++
FODS PER PLANT		1.06	1.44	1.44	1.44	96	96	96
HEIGHT		1.00	-.03	*01	*14+	*21++	*18+	,49++
FOD		288	336	336	336	336	336	96
100 SEED WEIGHT		288	336	288	288	288	288	192
QUALITY OF SEED		288	*25++	*42++	1.00	*32++	*22++	,18++
PERCENT GERM.		288	336	288	336	336	336	240

TABLE 44 COMBINED ANALYSIS OF GROUP A SITES IN ZONE X, ISUEX 1979

VARIETY	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NOODLE ABUND 1	NOODLE ABUND 2	NOODLE ACT. 1	NOODLE ACT. 2	PLANT HEIGHT	LONGING
Mitchell	2622.94	48.71	142.21	4.25	2.75	61.88	67.88	94.40	2.00
Calland	2512.69	40.29	134.21	2.75	1.00	73.63	97.63	95.05	1.88
Ransom	2356.72	73.58	179.04	2.75	2.00	76.25	60.50	98.29	2.25
Williams	2321.04	41.96	142.67	2.00	1.00	72.50	65.25	83.65	1.19
Franklin	2269.07	40.33	131.50	3.50	1.00	66.63	92.88	95.18	1.75
Cutler 71	2146.70	40.67	138.00	3.00	1.00	75.39	80.88	93.23	2.13
Bossier	2140.83	80.04	129.54	2.75	1.75	82.50	59.25	105.03	2.75
Forrest	2140.05	65.67	156.21	2.50	1.50	61.88	73.00	93.79	1.88
Davis	2092.76	76.71	175.54	4.00	1.50	73.38	71.38	103.82	2.00
Rillito	1887.85	75.58	173.54	2.75	2.00	70.63	90.63	113.17	2.69
GRAND MEAN	2249.07	58.35	155.25	3.03	1.55	71.51	75.93	97.56	2.05
NUMBER EXPERIMENTS CONTRIBUTING	6	6	6	1	1	2	2	5	4
STANDARD ERROR OF VARIETY MEAN	251.40	2.76	5.41	.57	.46	11.49	12.67	5.03	.36
COEFFICIENT OF VARIATION	54.76%	23.14%	17.08%	37.68%	59.03%	45.46%	47.26%	23.06%	70.80%
5% LSD VARIETY MEANS (*****=NS)	*****	7.85	15.42	*****	*****	*****	*****	14.43	*****
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ = PROB=.05, ++ = PROB=.01)									
YIELD KG/HA	1.00	-.01	.06	-.01	-.05	-.46++	-.47++	.324+	.19+
DAYS TO FLOWER	.240	-.01	.240	.40	.40	.80	.80	200	160
DAYS TO MATURITY	.240	.240	.240	.09	.40++	.33++	.12	.324+	.374+
NOODLE ABUND 1	.240	.06	.240	.40	.40	.80	.80	200	160
NOODLE ABUND 2	.240	.06	.240	.17	.39+	.23+	.16	.44++	.44++
NOODLE ACT. 1	.240	.01	.240	.40	.40	.80	.80	200	160
NOODLE ACT. 2	.240	.01	.240	.17	.00	.37+	.09	.18	.16
PLANT HEIGHT	.240	.05	.240	.40	.40	.40	.40	40	40
PLANT HARVEST	.240	.05	.240	.09	.09	.11	.32+	.22	.34+
LONGING	.240	.05	.240	.09	.09	.11	.40	.40	.40
Shatter	.240	.05	.240	.09	.09	.11	.32+	.22	.34+
Plants	.240	.03	.240	.05	.05	.12	.22	.27+	.27+
Folns per plant	.240	.03	.240	.05	.05	.12	.40	.39+	.27+
Foln height	.240	.03	.240	.05	.05	.12	.40	.39+	.27+
100 seed weight	.240	.03	.240	.05	.05	.12	.40	.39+	.27+
Quality of seed	.240	.03	.240	.05	.05	.12	.40	.39+	.27+
Percent germ.	.240	.03	.240	.05	.05	.12	.40	.39+	.27+

TABLE 44 COMBINED ANALYSIS OF GROUP A SITES IN ZONE X, ISUEX 1978

VARIETY	SHATTER	PLANTS HARVEST	PODS PER PLANT	FOD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
MICHELL	1.44	119.80	36.05	12.68	17.66	3.50	69.50
CALLAND	1.63	170.40	26.27	10.35	17.16	3.65	56.03
RANSOM	1.38	122.75	26.78	9.18	17.50	2.55	73.03
WILLIAMS	1.31	157.25	23.10	7.03	17.43	2.55	53.63
FRANKLIN	1.63	158.90	25.75	12.43	16.79	3.70	51.17
CUTLER 71	1.44	130.45	31.47	14.90	17.47	3.75	57.08
BOSSIER	1.56	114.80	39.48	11.05	17.08	1.75	68.00
FORREST	1.31	125.55	29.97	7.73	15.63	2.85	76.00
DAVIS	1.38	131.75	30.48	6.53	16.14	2.50	60.50
RILLITO	1.44	98.75	31.55	8.90	14.31	2.40	81.17
GRAND MEAN	1.45	133.04	30.09	10.08	16.72	2.92	64.64
NUMBER EXPERIMENTS CONTRIBUTING	4	5	5	1	4	5	3
STANDARD ERROR OF VARIETY MEAN	.16	11.44	4.79	1.24	1.01	.42	13.49
COEFFICIENT OF VARIATION	45.45%	38.44%	71.14%	24.60%	24.11%	64.86%	72.28%
5% LSD VARIETY MEANS (**NS=NS)	*****NS	32.80	*****NS	3.60	*****NS	1.21	*****NS
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ - PROB=.05, ++ - PROB=.01)							
YIELD	KG/HA	-18+	-.03	.65++	-.21	.59++	-.55++
DAYS TO FLOWER		160	200	200	40	160	*32++
DAYS TO MATURITY		160	200	200	40	160	120
NODULE ABUND 1		-.05	.05	.23++	-.47++	*15	*34++
NODULE ABUND 2		-.05	-.09	.200	40	160	200
NODULE ABUND 2		-.08	-.19	.01	.00	.00	120
NODULE ACT. 1		40	40	40	0	40	120
NODULE ACT. 2		364+	564+	31++	-.08	.02	*45++
PLANT HEIGHT		80	80	80	40	80	40
LODGING		160	160	160	40	160	120
SHATTER		80	80	80	40	80	40
PLANTS HARVEST		160	160	160	40	160	120
PODS PER PLANT		160	200	200	40	160	120
FOD HEIGHT		160	200	200	40	160	120
100 SEED WEIGHT		160	160	160	40	160	120
QUALITY OF SEED		160	200	200	40	160	120
PERCENT GERM.		120	120	120	40	120	120

TABLE 45 COMBINED ANALYSIS FOR GROUP B IN ZONE X, ISVEX 1978

VARIETY	YIELD KG/HA	DAYS TO FLOWER	DAYS TO Maturity	NODULE ABUND. 1	NODULE ABUND. 2	PLANT HEIGHT	LOGGING
						NODULE ACT. 2	
ELF	2480.06	38.08	108.42	.00	3.50	.00	85.00
CALLAND	2404.14	36.04	107.08	.00	3.75	.00	75.00
COLUMBUS	2363.28	40.13	120.38	.00	3.75	.00	75.64
FRANKLIN	2359.64	38.67	114.54	.00	3.50	.00	70.00
UNION	2321.65	37.96	110.46	.00	3.50	.00	68.75
MICHELL	2314.05	39.33	115.25	.00	3.50	.00	58.75
WILLIAMS	2291.80	36.83	103.79	.00	3.50	.00	77.03
CRAWFORD	2282.92	31.17	90.42	.00	3.50	.00	76.00
HARCOR	2167.88	33.00	95.42	.00	4.00	.00	77.50
HODGSON	2032.65	31.79	87.46	.00	4.00	.00	56.25
EVANS	2026.80	37.71	107.08	.00	3.50	.00	65.00
STEELE	1803.89	30.46	86.33	.00	3.75	.00	80.00
SWIFT	1588.87	29.29	86.42	.00	4.25	.00	61.25
ALTONA	1324.01	28.38	76.29	.00	4.25	.00	56.74
GRAND MEAN	2125.83	34.92	100.67	.00	3.73	.00	66.16
NUMBER EXPERIMENTS	7	6	6	.0	1	.0	65.39
CONTRIBUTING							1.52
STANDARD ERROR OF VARIETY MEAN	190.00	1.40	4.13	.00	.28	.1	7
COEFFICIENT OF VARIATION	47.29%	19.68%	20.10%	.00%	15.11%	.00%	1.50
5% LSD VARIETY MEANS (**NS=NS)	534.96	3.96	11.66	.00	***NS**	.00	57.96%

							7.55
CORRELATIONS AND NUMBER OF OBSERVATIONS (4 - PROB=.05, ++ - PROB=.01)							
YIELD	KG/HA	1.00	*22++	*23++	.00	-23+	.00
DAYS TO FLOWER		392	336	336	.0	.56	.0
DAYS TO Maturity			*22++	*62++	*00	-27+	.00
NODULE ABUND. 1			336	336	.0	.56	.24
NODULE ABUND. 2			*23++	*62++	*00	-23	.00
NODULE ACT. 1			336	336	.0	.56	.56
NODULE ACT. 2			*00	*00	1.00	*00	.00
PLANT HEIGHT			0	0	0	0	*00
PLANTS HARVEST			*27+	-23+	*00	1.00	*00
LOGGING			-23+	*21+	*00	*75++	.00
SHATTER			-17++	-17++	*00	*00	*00
PODS PER PLANT			-17++	-07	*00	*00	*00
POD HEIGHT			*15++	*44++	*00	*09	*00
100 SEED WEIGHT			*34++	*15++	*00	*56	*00
QUALITY OF SEED			*34++	*15++	*00	*56	*00
PERCENT GERM.			*19++	*19++	*00	*00	*00

TABLE 45 COMBINED ANALYSIS FOR GROUP B IN ZONE X, ISUWEX 1978

VARIETY	SHATTER	PLANTS HARVEST	PODS PER PLANT	FOD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
ELF	1.35	186.25	25.21	6.51	15.99	3.75	74.56
CALLAND	1.25	217.33	23.17	11.89	16.30	3.67	93.56
COLUMBUS	1.15	210.50	27.83	12.54	15.63	2.83	96.31
FRANKLIN	1.25	195.94	25.54	11.15	15.56	3.67	92.75
UNION	1.15	200.21	22.84	10.61	17.12	3.75	96.25
MITCHELL	1.50	186.33	29.71	9.67	15.35	3.50	74.75
WILLIAMS	1.15	206.25	21.55	10.46	16.65	3.58	93.56
CRAWFORD	1.30	198.92	27.92	6.73	14.42	3.33	75.67
HARCOR	1.50	201.46	28.65	5.28	13.58	3.92	31.31
HODGSON	1.40	203.50	25.83	7.61	14.54	3.67	84.63
EVANS	1.35	183.67	27.92	11.59	14.20	3.92	76.69
STEELE	1.35	189.21	23.27	7.70	15.76	3.67	92.63
SWIFT	1.70	223.50	22.83	7.01	12.62	4.25	81.00
ALTONA	2.05	207.54	21.18	7.41	13.88	4.17	63.75
GRAND MEAN	1.39	200.76	25.25	9.01	15.11	3.69	88.39
NUMBER EXPERIMENTS CONTRIBUTING	5	6	7	4	6	3	4
STANDARD ERROR OF VARIETY MEAN	.22	9.82	1.69	.96	.67	.40	5.69
COEFFICIENT OF VARIATION	70.61%	23.97%	35.32%	42.66%	31.85%	37.98%	25.76%
5% LSD VARIETY MEANS (**NS=NS)	*****	*****	4.74	2.75	1.90	*****	16.28

CORRELATIONS AND NUMBER OF OBSERVATIONS

(+) - PROB=.05, (-) - PROB=.01)

YIELD	KG/HA	-.284+	-.254+	*.284+	*.13	*.324+	-.604+
DAYS TO FLOWER		.280	.336	.392	.224	.336	.04
DAYS TO MATURITY		-.174+	+.214+	-.214+	*.314+	*.324+	.224
NODULE ABUND 1		.280	.336	.336	.224	.280	.224
NODULE ABUND 2		.00	.00	*.124+	*.404+	*.514+	*.204+
NODULE ACT. 1		.00	.00	*.00	*.00	*.00	*.00
NODULE ACT. 2		.00	.00	-.03	-.21	*.00	*.00
PLANT HEIGHT		-.01	-.01	*.304+	*.00	*.00	*.00
LONGING		0	56	56	0	0	0
SHATTER		-.244+	-.264+	*.544+	*.564+	*.474+	*.474+
PLANTS HARVEST		.280	.336	.392	.224	.336	.224
PODS PER PLANT		-.164+	-.544+	*.444+	*.08	*.294+	*.00
FOD HEIGHT		.280	.336	.280	.224	.280	.224
100 SEED WEIGHT		-.01	1.00	-.434+	*.11	-.10	*.214+
QUALITY OF SEED		1.68	1.68	1.68	1.68	1.68	.02
PERCENT GERM.		-.324+	-.02	*.344+	*.274+	*.204+	*.224+

TABLE 46 COMBINED ANALYSIS FOR AFRICAN SITES IN ZONE X, ISUDEX 1978

VARIETY	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LONGING
MITCHELL	2623.47	40.30	118.75	*00	3.50	25.00	61.00	97.14	1.83
CALLAND	2401.35	39.35	118.95	*00	3.75	47.25	85.13	94.91	1.92
FRANKLIN	2229.54	39.45	120.70	*00	3.50	33.25	77.25	96.24	1.75
CUTLER 71	2158.83	39.40	119.00	*00	3.00	50.75	80.25	95.44	1.92
WILLIAMS	2069.55	39.15	124.50	*00	3.50	50.00	50.25	83.80	1.17
NUMBER EXPERIMENTS CONTRIBUTING	2296.55	39.53	120.38	*00	3.45	41.25	70.78	93.51	1.72
STANDARD ERROR OF VARIETY MEAN	127.39	5	5	0	1	1	4	4	3
COEFFICIENT OF VARIATION	24.81%	.68	5.58	*00	*20	26.43	13.96	1.78	,32
5% LSD VARIETY MEANS (**NS=NS)	*****	7.66%	20.72%	*00%	11.83%	128.15%	55.78%	7.62%	63.59%

CORRELATIONS AND NUMBER OF OBSERVATIONS (+ = PROB=.05, ++ = PROB=.01)									
YIELD	KG/HA	1.00	*29++	*1.2	*00	-*.04	*1.0	-.27	*58++
DAYS TO FLOWER		1.00	1.00	*1.00	0	20	40	80	60
DAYS TO MATURITY		*29++	1.00	*56++	*00	*19	*00	*04	*76++
NODULE ABUND 1		1.00	1.00	1.00	0	20	40	80	60
NODULE ABUND 2		*04	*1.9	*22	*00	*22	*10	*39+	*48++
NODULE ACT. 1		*1.0	*1.0	*1.00	0	20	40	80	*60++
NODULE ACT. 2		*27	*04	*39+	*00	*00	*00	*00	*00
PLANT HEIGHT		40	40	40	0	1.00	*00	*00	*00
LOGGING		1.6	*76++	*60++	*00	*00	*15	*36	*00
SHATTER		*08	*60++	*44++	*00	0	20	20	60
PLANTS HARVEST		60	60	60	0	*00	*10	*51+	*52++
FODS PER PLANT		*04	*30++	*35++	*00	*13	*22	*20	*62++
POD HEIGHT		40	40	40	0	0	20	20	60
100 SEED WEIGHT		1.00	1.00	1.00	0	20	40	80	*61++
QUALITY OF SEED		*57++	*08	*07	*00	*24	*17	*1.4	*51++
PERCENT GERM.		*09	*06	*25	*00	*00	*18	*27	*07
		40	40	40	0	0	20	40	*40
		74++	*52++	*46++	*00	*00	*16	*24	*65++
		60	60	60	0	0	20	20	*29+
		*82++	*47++	*28+	*00	*00	*10	*45+	*54++
		80	80	80	0	0	20	20	*30+
		*60++	*94++	*82++	*00	*00	*19	*00	*82++
		60	60	60	0	0	20	20	60

TABLE 46 COMBINED ANALYSIS FOR AFRICAN SITES IN ZONE X, ISUEX 1978

VARIETY	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
MITCHELL	1.17	133.75	39.50	11.79	16.82	3.06
CALLAND	1.42	177.25	30.55	11.66	18.61	3.38
FRANKLIN	1.50	162.60	27.15	11.83	16.76	2.94
CUTLER 71	1.17	154.20	29.49	13.83	18.97	3.06
WILLIAMS	1.00	164.40	25.66	9.14	16.97	2.63
GRAND MEAN	1.25	158.44	30.47	11.65	17.62	3.01
NUMBER EXPERIMENTS CONTRIBUTING	3	5	5	2	3	3
STANDARD ERROR OF VARIETY MEAN	.20	8.92	2.83	1.44	.58	.19
COEFFICIENT OF VARIATION	56.57%	25.18%	41.47%	35.06%	11.35%	25.76%
5% LSD VARIETY MEANS (**NS=NS)	*****	26.74	7.96	*****	*****	*****
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ = PROB=.05, ++ = PROB=.01)						
YIELD KG/HA	.08	.04	.57++	-.09	.74++	-.82++
DAYS TO FLOWER	.60++	1.00	.100	.40	.60	.60
DAYS TO Maturity	.44++	.30++	-.08	-.06	.52++	-.47++
NODULE ABUND 1	.00	.00	.07	-.25	.46++	-.28+
NODULE ABUND 2	0	0	.00	.00	.00	.00
NODULE ABUND 2	.00	-.13	.24	.00	.00	.00
NODULE ACT. 1	-.10	-.22	-.17	-.18	.16	-.10
NODULE ACT. 2	.20	.20	.20	.20	.20	.20
PLANT HEIGHT	.52++	-.61++	.51++	.07	.65++	-.54++
LOGGING	.62++	-.20	.11	.11	.29+	-.30+
SHATTER	1.00	-.27+	.14	.22	.19	-.21
PLANTS HARVEST	-.27+	1.00	-.37++	.21	.38++	-.07
PODS PER PLANT	.14	-.37++	1.00	.17	.29+	.50++
POD HEIGHT	.60	.60	.60	.40	.60	.60
100 SEED WEIGHT	.40	.40	.40	.40	.40	.40
QUALITY OF SEED	-.21	-.07	-.56++	.18	-.59++	-.59++
PERCENT GERM.	-.54++	.61++	-.36++	.02	-.59++	.71++

TABLE 47 COMBINED ANALYSIS FOR MIDDLE EASTERN SITES IN ZONE X, ISSUE 1978

VARIETY	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
CALLAND	2835.55	40.81	127.33	.00	.00	.00	.00	80.09	1.08
FORREST	2741.33	65.56	143.75	.00	.00	.00	.00	77.15	2.00
MITCHELL	2544.95	44.56	130.42	.00	.00	.00	.00	75.75	1.08
RILLITO	2378.82	81.44	172.67	.00	.00	.00	.00	95.36	2.42
FRANKLIN	2253.24	40.69	123.42	.00	.00	.00	.00	76.80	1.17
CUTLER 71	2217.53	41.50	127.67	.00	.00	.00	.00	75.42	1.17
GRAND MEAN	2495.25	52.43	137.54	.00	.00	.00	.00	80.10	1.49
NUMBER EXPERIMENTS CONTRIBUTING	4	4	3	0	0	0	0	4	3
STANDARD ERROR OF VARIETY MEAN	294.96	2.17	4.36	.00	.00	.00	.00	5.43	.49
COEFFICIENT OF VARIATION	47.28%	16.55%	10.98%	.00%	.00%	.00%	.00%	27.11%	1.14.21%
5% LSD VARIETY MEANS (**NS=NS)	*****	6.54	1.373	.00	.00	.00	.00	*****	*****
CORRELATIONS AND NUMBER OF OBSERVATIONS († = FROM = .05, ‡ = PROB = .01)									
YIELD	KG/HA	1.00	-+.18	.03	.00	.00	.00	.774+	.314+
DAYS TO FLOWER		.96	.96	.72	0	0	0	.96	.72
DAYS TO MATURITY		-.18	1.00	.644+	.00	.00	.00	.01	.444+
NODULE ABUND 1		.96	.96	.72	0	0	0	.96	.72
NODULE ABUND 2		-.03	.644+	1.00	.00	.00	.00	.384+	.544+
NODULE ACT. 1		.00	.00	.72	0	0	0	.72	.48
NODULE ACT. 2		.00	.00	.00	1.00	.00	.00	.00	.00
PLANT HEIGHT		.774+	.01	.384+	.00	1.00	.00	.00	.00
LOGGING		.96	.96	.72	0	0	0	.96	.72
SHATTER		-.454+	.06	.494+	.00	.00	.00	.72	.72
PLANTS HARVEST		.72	.72	.48	0	0	0	.574+	.264
PODS PER PLANT		-.454+	.08	.434+	.00	.00	.00	.72	.72
FOD HEIGHT		.34+	-.614+	-.12	.00	.00	.00	.16	.00
100 SEED WEIGHT		.48	.48	.48	0	0	0	.24	.01
QUALITY OF SEED		-.424+	.264+	-.20	.00	.00	.00	.48	.48
PERCENT GERM.		.48	.48	.48	0	0	0	.06	.06

TABLE 47 COMBINED ANALYSIS FOR MIDDLE EASTERN SITES IN ZONE X, ISVEX 1978

VARIETY	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
CALLAND	1.50	157.13	39.70	12.75	15.62	3.88	45.88
FORREST	1.42	87.63	55.69	14.75	13.36	2.25	78.75
MITCHELL	1.42	62.25	46.22	11.00	14.83	3.25	76.00
RILLITO	1.08	47.38	43.65	6.50	12.25	1.50	92.13
FRANKLIN	1.58	102.00	39.40	8.25	13.88	3.63	33.00
CUTLER 71	1.92	72.75	37.80	14.75	15.63	3.63	47.25
GRAND MEAN	1.49	88.19	43.74	11.33	14.26	3.02	62.17
NUMBER EXPERIMENTS CONTRIBUTING	3	2	3	1	3	.2	.2
STANDARD ERROR OF VARIETY MEAN	*29	19.79	6.72	1.37	*60	*45	15.88
COEFFICIENT OF VARIATION	66.63%	63.46%	53.21%	24.11%	14.48%	42.36%	72.26%
5% LSD VARIETY MEANS (**NS=NS)	*****	*****	*****	4.12	1.88	*****	*****
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ = PTRUE=.05, ++ = PROB=.01)							
YIELD KG/HA	-*.45++	*34+	.42++	*.08	*.62++	-.17	*.09
DAYS TO FLOWER	.72	48	72	24	72	.48	.48
DAYS TO MATURITY	.06	-.61++	.26+	-.43+	-.42++	-.80++	*68++
NODULE ABUND 1	.72	48	72	24	72	.48	.48
NODULE ABUND 2	-.49++	-.12	-.20	-.46+	-.53++	-.33+	*57++
NODULE ACT. 1	.48	48	48	24	48	.48	.48
NODULE ACT. 2	.00	.00	.00	.00	.00	.00	.00
PLANT HEIGHT	0	0	0	0	0	0	0
LODGING	0	0	0	0	0	0	0
SHATTER	0	0	0	0	0	0	0
PLANTS HARVEST	0	0	0	0	0	0	0
PODS PER PLANT	0	0	0	0	0	0	0
POD HEIGHT	0	0	0	0	0	0	0
100 SEED WEIGHT	0	0	0	0	0	0	0
QUALITY OF SEED	0	0	0	0	0	0	0
PERCENT GERM.	0	0	0	0	0	0	0

TABLE 48 EXPERIMENT 113 YEAR 1978

REGION - AFRICA
 SITE - AHMAR - EL - AIN
 LATITUDE - 36 DEG. 38 MIN. N
 FERTILIZER USED (KG/HA) - N 150.0, P 90.0, K 60.0
 SOIL TYPE - SAND 20%, FH 7.5
 DATE PLANTED - APRIL 25, 1978

C O R R E L A T I O N S

YIELD	KG/HA	1.00	*46++	*44++	*00	*00	*59++	*23
DAYS TO FLOWER		*46++	1.00	*90++	*00	*00	*60++	*34+
DAYS TO MATURITY		*44++		1.00	*00	*00	*62++	*34+
NUDULE ABUND 1		*00	*00	*00	1.00	*00	*00	*00
NUDULE ABUND 2		*00	*00	*00		1.00	*00	*00
NUDULE ACT. 1		*00	*00	*00		1.00	*00	*00
NUDULE ACT. 2		*00	*00	*00		1.00	*00	*00
PLANT HEIGHT		*59++	*60++	*62++	*00	*00	1.00	*56++
LOGGING		*23	*31+	*31+	*00	*00	*00	1.00
SHATTER		-.16	-.32+	-.36++	*00	*00	-.39++	-.14
PLANTS HARVEST			-.09	-.06	*00	*00	-.09	-.08
PONG PER PLANT			*43++	*19	*14	*00	*00	*43++
POO HEIGHT			*0.7	*29+	*28+	*00	*00	*52++
100 SEED WEIGHT			*64++	*63++	*61++	*00	*00	*34++
QUALITY OF SEED			*57++	-.91++	-.81++	*00	*00	*19
PERCENT GERM.			*00	*00	*00	*00	*00	-.31++

TABLE 48 EXPERIMENT 113 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
3	FOSSIER	1.00	352.25	18.58	21.58	12.05	.00	43.7	17.9
8	FORREST	1.00	375.50	23.45	13.00	11.78	.00	42.4	18.7
14	MITCHELL	1.00	349.00	13.23	25.58	13.43	.00	45.9	14.9
9	DAVIS	1.00	336.25	18.85	19.70	13.75	.00	43.1	17.3
1	IMPROVED FELICAN	1.00	370.25	32.50	31.95	11.23	.00	44.7	16.0
4	WILLIAMS	1.50	400.00	19.15	13.05	9.30	.00	44.0	18.5
6	COBB	1.00	366.75	27.03	15.25	10.85	.00	40.6	16.2
16	CRAWFORD	1.00	312.00	25.05	12.43	10.45	.00	39.9	21.2
7	JAMES	1.00	319.25	23.45	42.80	9.10	.00	39.8	17.0
12	FRANKLIN	1.50	449.00	18.38	18.55	11.20	.00	40.9	18.6
10	GASOY 17	1.50	380.00	16.88	13.15	9.53	.00	41.1	22.3
5	RANSOM	1.00	444.00	15.95	23.95	12.28	.00	41.8	21.1
2	RILLITO	1.00	246.25	15.68	20.58	11.45	.00	42.9	17.9
15	BRAGG	1.00	377.00	12.38	22.70	9.40	.00	42.5	18.3
11	CALLAND	1.00	358.00	18.53	12.25	7.83	.00	44.3	17.7
13	CUTLER 71	1.00	362.50	17.45	16.43	8.40	.00		
	GRAND MEAN	1.09	362.38	19.78	20.18	10.74	.00		
	STANDARD ERROR OF A VARIETY MEAN	.13	29.52	3.14	2.28	.74	.00		
	COEFFICIENT OF VARIATION	23.36%	16.29%	31.73%	22.64%	13.80%	15.54%	*00%	
95	5% LSD VARIETY MEANS (*****NS)	.36	34.08	8.94	6.51	2.11	.58	.00	

CORRELATIONS

(+ = PROB=.05 ++ = PROB=.01)

YIELD KG/HA -.16 .01 *43++ .07 *64++ -.57++ .00
 DAYS TO FLOWER -.32+ -.09 *19 *.29+ *63++ *91++ .00
 DAYS TO MATURITY -.36++ -.06 *14 *.28+ *61++ *81++ .00
 NODULE ABUND 1 .00 .00 *00 *00 *00 *00 .00
 NODULE ABUND 2 .00 .00 *00 *00 *00 *00 .00
 NODULE ACT. 1 .00 .00 *00 *00 *00 *00 .00
 NODULE ACT. 2 .00 .00 *00 *00 *00 *00 .00
 PLANT HEIGHT -.39++ -.09 *53++ *52++ *63++ *61++ .00
 LODGING -.14 -.08 *43++ *.34++ *.19 *.31+ .00
 SHATTER 1.00 *21 -.10 *17 *.26+ *.29+ .00
 PLANTS HARVEST .21 1.00 *-.10 *-.04 *.06 *.06 .00
 PLANTS PLANT -.10 *+.10 1.00 *.08 *.16 *.28+ .00
 POD HEIGHT *+.17 *-.04 *.08 1.00 *.18 *.20 .00
 100 SEED WEIGHT *-.26+ *.06 *-.16 *.18 *.70+ *.70+ .00
 QUALITY OF SEED .29+ *.06 *-.28+ *-.20 *1.00 1.00 .00
 PERCENT GERM. .00 *.00 *.00 *.00 *.00 *.00 1.00

TABLE 49 EXPERIMENT 115 YEAR 1978

REGION - AFRICA
 SITE - KHEMIS - MULIANA
 LATITUDE - 36 DEG. 15 MIN. N
 COOPERATOR - I.D.C.I.
 DATE PLANTED - APRIL 11, 1978
 SOIL PH - 8.2
 FERTILIZER USED (KG/HA) - N 30.0, P 90.0, K 60.0
 AMOUNT OF MOISTURE - 938 MM
 NUMBER OF IRRIGATIONS - 24 (510 MM)
 LOCAL VARIETIES - KAI YU 3, TIE - FENG 19

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1		NODULE ABUND 2		NODULE ACT. 1		NODULE ACT. 2		PLANT HEIGHT	LODGING
					NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING	PLANT HEIGHT	LODGING		
6	TIE - FENG 19	705.97	82.00	150.00	3.00	1.75	.00	.00	.00	.00	42.23	1.75		
2	KAI YU 3	419.62	82.00	150.00	2.00	2.25	.00	.00	.00	.00	46.83	1.00		
4	CUTLER 71	297.17	82.00	150.00	1.00	1.00	.00	.00	.00	.00	56.98	1.00		
5	MITCHELL	290.09	82.00	150.00	1.75	2.00	.00	.00	.00	.00	47.90	1.00		
1	WILLIAMS	280.10	82.00	150.00	1.50	1.75	.00	.00	.00	.00	49.58	1.00		
3	CALLAND	216.58	82.00	150.00	2.00	1.75	.00	.00	.00	.00	55.08	1.00		
	GRAND MEAN	368.26	82.00	150.00	1.88	1.75	.00	.00	.00	.00	49.76	1.13		
	STANDARD ERROR OF A VARIETY MEAN	59.36	.00	.00	.57	.46	.00	.00	.00	.00	3.41	.10		
	COEFFICIENT OF VARIATION	32.24%	.00%	.00%	40.48%	52.16%	.00%	.00%	.00	.00	13.69%	16.14%		
	5% LSD VARIETY MEANS (*****NS)	178.95	.00	.00	*****	*****	.00	.00	*****	.00	*****	.31		
	CORRELATIONS (+ = PROB=.05 ++ = PROB=.01)													
	YIELD KG/HA	1.00	.00	.00	.18	.08	.00	.00	.00	.00	.00	-.12	.50+	
	DAYS TO FLOWER	.00	1.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
	DAYS TO MATURITY	.00	.00	1.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
	NODULE ABUND 1	.18	.00	.00	1.00	.41+	.00	.00	.00	.00	.00	-.56++	.49+	
	NODULE ABUND 2	.08	.00	.00	.41+	1.00	.00	.00	.00	.00	.00	-.30	.11	
	NODULE ACT. 1	.00	.00	.00	.00	.00	1.00	.00	.00	.00	.00	.00	.00	
	NODULE ACT. 2	.00	.00	.00	.00	.00	.00	1.00	.00	.00	.00	.00	.00	
	PLANT HEIGHT	-.12	.00	.00	-.56++	-.30	.00	.00	.00	.00	.00	-.23	1.00	
	LODGING	.50+	.00	.00	.49+	.11	.00	.00	.00	.00	.00	-.23	1.00	
	SHATTER	.64++	.00	.00	.39	.21	.00	.00	.00	.00	.00	-.46+	.53++	
	PLANTS HARVEST	.22	.00	.00	-.32	.00	.00	.00	.00	.00	.00	.05	-.38	
	PODS PER PLANT	.67++	.00	.00	.29	.03	.00	.00	.00	.00	.00	-.18	.57++	
	POD HEIGHT	-.35	.00	.00	-.33	-.07	.00	.00	.00	.00	.00	-.30	-.29	
	100 SEED WEIGHT	.31	.00	.00	.25	.26	.00	.00	.00	.00	.00	-.42+	.24	
	QUALITY OF SEED	.06	.00	.00	.14	.06	.00	.00	.00	.00	.00	.11	0.00	
	PERCENT GERM.	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	

TABLE 49 EXPERIMENT 115 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	PODS PER PLANT	FOD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
6	TIE - FENG 19	4.00	439.25	16.48	11.15	10.13	4.00	.00	43.1
2	KAI YU 3	4.00	480.50	13.50	12.53	9.80	5.00	.00	43.8
4	CUTLER 71	1.00	476.75	11.58	14.70	8.75	4.00	.00	42.6
5	MITCHELL	1.00	427.75	11.28	15.68	9.13	3.00	.00	42.6
1	WILLIAMS	1.00	464.00	13.15	11.75	9.63	3.00	.00	42.6
3	CALLAND	1.00	419.25	7.90	13.98	8.33	5.00	.00	46.2
	GRAND MEAN	2.00	451.25	12.31	13.30	9.29	4.00	.00	43.3
	STANDARD ERROR OF A VARIETY MEAN	.00	32.52	1.39	1.45	.70	.00	.00	.00
	COEFFICIENT OF VARIATION	.00%	14.41%	22.64%	21.85%	15.00%	.00%	.00%	.00%
	5% LSD VARIETY MEANS (*****=NS)	.00	*****	4.20	*****	*****	.00	.00	.00
CORRELATIONS (+ = PROB=.05 - = PROB=.01)									
	YIELD KG/HA	.64++	.22	.67++	-.35	.34	.06	.00	.00
	DAYS TO FLOWER	.00	.00	.00	.00	.00	.00	.00	.00
	DAYS TO MATURITY	.00	.00	.00	.00	.00	.00	.00	.00
	NODULE ABUND 1	.39	-.32	.29	-.33	.25	.14	.00	.00
	NODULE ABUND 2	.21	.00	.03	-.07	.26	.06	.00	.00
	NODULE ACT. 1	.00	.00	.00	.00	.00	.00	.00	.00
	NODULE ACT. 2	.00	.00	.00	.00	.00	.00	.00	.00
	PLANT HEIGHT	-.46+	.05	-.18	.30	-.42+	.14	.00	.00
	LODGING	.53++	-.38	.57++	-.29	.24	.00	.00	.00
	SHATTER	1.00	*.10	.54++	-.36	.36	.43+	.00	.00
	PLANTS HARVEST	.10	1.00	-.23	.17	-.11	.03	.00	.00
	PODS PER PLANT	.54++	-.23	1.00	-.64++	.49+	-.19	.00	.00
	POD HEIGHT	-.36	*.17	-.64++	1.00	-.53++	-.06	.00	.00
	100 SEED WEIGHT	.36	-.11	.49+	-.53++	1.00	-.10	.00	.00
	QUALITY OF SEED	.43+	*.03	-.18	-.06	-.10	1.00	.00	.00
	PERCENT GERM.	.00	.00	.00	.00	.00	1.00	.00	.00

TABLE 50 EXPERIMENT 174 YEAR 1978

REGION - AFRICA
SITE - MAHALAFYE
LATITUDE - 23 DEG. 7 MIN. S
COOPERATOR - G. MAFHANYANE

COUNTRY - BOTSWANA
ELEVATION - 1000 M
LONGITUDE - 26 DEG. 50 MIN. E

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
2	RILLITO	1582.94	.00	.00	4.00	4.00	85.75	5.50	59.75	1.00
6	COBB	1333.00	.00	.00	4.00	4.00	82.75	4.75	37.00	1.00
1	IMPROVED FELICAN	1191.37	.00	.00	4.25	4.00	64.50	7.50	86.25	1.00
3	BOSSIER	1183.04	.00	.00	4.00	3.75	76.00	5.50	33.00	1.00
8	FORREST	966.42	.00	.00	4.25	4.25	61.00	3.75	34.25	1.00
11	CALLAND	808.13	.00	.00	4.00	4.00	74.00	11.00	39.00	1.00
16	CRAWFORD	783.14	.00	.00	4.00	4.00	67.25	8.00	31.50	1.00
5	RANSOM	766.47	.00	.00	4.00	3.75	73.00	11.25	39.25	1.00
9	DAVIS	766.47	.00	.00	4.00	4.00	78.50	9.25	35.50	1.00
15	BRAGG	741.48	.00	.00	4.00	3.75	89.00	8.75	39.25	1.00
14	MITCHELL	716.49	.00	.00	4.00	4.00	69.75	11.00	37.00	1.00
10	GASOY 17	691.49	.00	.00	4.00	3.75	83.25	11.00	35.25	1.00
7	JAMES	658.17	.00	.00	4.00	3.75	82.75	4.00	32.25	1.00
4	WILLIAMS	624.84	.00	.00	4.25	4.00	55.75	7.25	35.00	1.00
13	CUTLER 71	599.85	.00	.00	4.00	4.00	70.75	4.00	34.25	1.00
12	FRANKLIN	408.23	.00	.00	4.00	3.75	80.50	7.50	32.50	1.00
STANDARD ERROR OF A VARIETY MEAN		863.85	.00	.00	4.05	3.92	74.66	7.50	40.06	1.00
COEFFICIENT OF VARIATION		145.15	.00	.00	.11	.19	11.66	2.56	4.32	.00
5% LSD VARIETY MEANS (*****=NS)		33.61%	.00%	.00%	5.31%	9.36%	31.23%	68.15%	24.57%	.00%
5% LSD VARIETY MEANS (*****=NS)		413.46	.00	.00	*****	*****	*****	*****	12.31	.00

C O R R E L A T I O N S (+ - PROB=.05 + + - PROB=.01)

YIELD KG/HA	1.00	.00	.00	.18	.24	-.10	.33++	.00
DAYS TO FLOWER	.00	1.00	.00	.00	.00	.00	.00	.00
DAYS TO MATURITY	.00	.00	1.00	.00	.00	.00	.00	.00
NODULE ABUND 1	.18	.00	.00	1.00	.25+	-.76++	.19	.26+
NODULE ABUND 2	.24	.00	.00	.25+	1.00	-.29+	.14	.02
NODULE ACT. 1	-.10	.00	.00	-.76++	-.29+	1.00	.24	-.10
NODULE ACT. 2	-.10	.00	.00	-.19	-.14	.24	1.00	-.05
PLANT HEIGHT	.33++	.00	.00	.26+	.02	-.10	.05	1.00
LOGGING	.00	.00	.00	.00	.00	.00	.00	.00
SHATTER	-.32++	.00	.00	-.16	.03	.11	.14	-.34++
PLANTS HARVEST	-.18	.00	.00	-.02	-.28+	-.11	-.00	.00
PODS PER PLANT	.71++	.00	.00	.13	.13	.04	-.00	.48++
POD HEIGHT	.27+	.00	.00	.21	-.03	-.11	-.13	.81++
100 SEED WEIGHT	-.06	.00	.00	-.18	.12	.14	-.12	-.35++
QUALITY OF SEED	-.34++	.00	.00	-.15	-.29+	.14	-.24	.00
GERM PERCENT	.00	.00	.00	.00	.00	.00	.00	.00

TABLE 50 EXPERIMENT 174 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
2 RILLITO		1.00	22.75	94.25	6.25	16.25	1.75	.00	42.6	21.2
6 COBB		1.25	39.00	60.00	6.75	14.25	2.50	.00	39.9	22.4
1 IMPROVED PELICAN		1.00	39.25	69.75	14.75	9.75	1.50	.00	41.9	20.1
1 BOSSIER		1.25	38.25	61.75	7.25	14.00	2.00	.00	43.8	19.4
3 FORREST		1.00	32.75	42.00	5.25	11.50	3.25	.00	40.4	19.0
8 CALLAND		1.75	38.75	25.25	6.00	17.50	3.00	.00	40.3	19.4
11 CRAWFORD		1.25	36.00	33.50	5.00	15.75	2.75	.00		
16 RANSOM		1.25	36.75	47.50	5.75	16.75	4.00	.00		
5 DAVIS		2.00	34.00	44.00	4.75	17.50	2.00	.00	41.9	20.6
9 BRAGG		1.25	39.00	51.25	6.00	18.00	3.25	.00	43.5	19.9
15 MITCHELL		2.00	33.25	34.75	5.75	15.50	2.00	.00	40.7	18.3
14 GASOY 17		1.75	34.25	46.75	5.50	17.00	2.75	.00	42.9	19.4
10 JAMES		1.25	36.00	32.00	5.00	15.75	3.25	.00	40.0	22.3
7 WILLIAMS		1.25	32.25	25.75	5.25	14.75	2.25	.00	41.1	20.6
4 CUTLER 71		2.25	45.00	26.50	6.50	13.75	2.75	.00	40.7	20.4
13 FRANKLIN		2.25	40.00	20.25	4.50	14.00	2.75	.00	36.9	22.9
	GRAND MEAN	1.48	36.08	44.70	6.27	15.13	2.61	.00		
	STANDARD ERROR OF A VARIETY MEAN	.29	4.53	7.64	.67	.86	*.35	.00		
	COEFFICIENT OF VARIATION	39.32%	25.13%	34.16%	21.41%	11.32%	26.84%	.00%		
-99-	5% LSD VARIETY MEANS (**NS=NS)	.63	*****	21.75	1.91	2.44	1.00			

CORRELATIONS (+ - PROB=.05) ++ - PROB=.01)

YIELD KG/HA	-.32++	-.18	.71++	.27+	-.06	-.34++	.00
DAYS TO FLOWER	.00	.00	.00	.00	.00	.00	.00
DAYS TO MATURITY	.00	.00	.00	.00	.00	.00	.00
NODULE ABUND 1	-.16	-.02	.13	.21	-.18	-.15	.00
NODULE ABUND 2	.03	-.28+	.13	-.03	-.12	-.29+	.00
NODULE ACT. 1	.11	-.11	.04	-.11	.14	.14	.00
NODULE ACT. 2	.14	-.11	-.00	-.13	.12	-.00	.00
PLANT HEIGHT	-.34++	-.00	.48++	.81++	-.35++	-.24	.00
LODGING	.00	.00	.00	.00	.00	.00	.00
SHATTER	1.00	.03	-.27+	-.30+	.18	-.10	.00
PLANTS HARVEST	.03	1.00	-.39++	.25+	-.21	.36++	.00
PODS PER PLANT	-.27+	-.39++	1.00	.29+	-.05	-.34++	.00
POD HEIGHT	-.30+	.25+	.29+	1.00	-.47++	-.20	.00
100 SEED WEIGHT	.18	-.21	-.05	-.47++	1.00	.15	.00
QUALITY OF SEED	-.10	.36++	-.34++	-.20	.15	1.00	.00
GERM. PERCENT	.00	.00	.00	.00	.00	1.00	

TABLE 51 EXPERIMENT 175 YEAR 1978

REGION - AFRICA
 SITE - SEBELE
 LATITUDE - 24 DEG. 34 MIN. S
 COOPERATORS - G. MAFIANANE, D.E. GOLLYFER
 DATE PLANTED - OCTOBER 27, 1978
 SOIL PH 5.5
 FERTILIZER USED (KG/HA) - P 20.0
 AMOUNT OF MOISTURE - 313.2 MM

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND. 1	NODULE ABUND. 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
6	COBB	268.60	52.50	125.50	.00	3.25	.00	56.25	35.00	.00
9	DAVIS	245.61	61.00	123.00	.00	1.75	.00	90.00	24.75	.00
2	RILLITO	221.28	57.50	135.75	.00	4.25	.00	35.00	48.50	.00
12	FRANKLIN	203.95	35.50	123.00	.00	5.00	.00	.00	18.75	.00
7	JAMES	188.29	33.25	132.25	.00	5.00	.00	.00	24.25	.00
15	CRAWFORD	184.29	40.50	123.00	.00	4.75	.00	.00	25.00	.00
8	FORREST	181.62	42.50	123.00	.00	3.75	.00	35.00	26.00	.00
5	RANSOM	158.29	51.00	123.00	.00	3.00	.00	43.75	20.50	.00
10	GASOY 17	155.63	51.00	125.50	.00	2.00	.00	86.25	23.75	.00
11	CALLAND	155.63	32.00	132.50	.00	5.00	.00	.00	23.25	.00
14	BRAGG	153.63	52.50	123.00	.00	2.50	.00	80.00	28.25	.00
13	MITCHELL	133.97	39.00	123.00	.00	5.00	.00	.00	33.75	.00
3	BOSSIER	114.97	66.00	151.00	.00	4.00	.00	32.50	35.75	.00
4	WILLIAMS	106.64	43.25	101.00	.00	4.50	.00	12.50	28.00	.00
1	IMPROVED PELICAN	46.32	57.50	146.50	.00	4.00	.00	43.75	68.00	.00

(+ - PROB=.05 ++ - PROB=.01)

C O R R E L A T I O N S

YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND. 1	NODULE ABUND. 2	PLANT ACT. 1	PLANT ACT. 2	HEIGHT	LODGING	SHATTER	HARVEST	PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
1.00	-.08	-.24	.00	-.22	.00	-.39++	.00	-.44++	.00	-.25	.00	.32+	.00	.00	.00
	1.00	.28+	.00	.01	.00	.00	.00	.09	.00	.37++	.00	.00	.00	.00	.00
	-.24	.28+	1.00	.00	1.00	.00	.00	.00	-.93++	.00	.00	.00	.00	.00	.00
	*.00	*.00	.00	.00	.00	.00	.00	.00	1.00	.00	.00	.00	.00	.00	.00
	-.22	-.39++	.01	.00	.00	.00	.00	.00	-.93++	.00	.00	.00	.00	.00	.00
	*.00	*.00	.00	.00	.00	.00	.00	.00	1.00	.00	.00	.00	.00	.00	.00
	*.13	*.44++	.09	.00	.00	-.93++	.00	.01	.00	.00	.00	.00	.00	.00	.00
	-.25	*.32+	.37++	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	*.00	*.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	-.54++	.06	.04	.00	.00	-.09	.00	.00	.00	.00	.00	.00	.00	.00	.00
	-.15	.17	-.10	.00	.00	-.18	.00	.00	.00	.00	.00	.00	.00	.00	.00
	*.00	*.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	*.00	*.06	-.45++	.09	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	-.06	.05	.13	.00	.00	.16	.00	.00	.00	-.17	.00	.00	.00	.00	.00
	*.00	*.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

TABLE 51 EXPERIMENT 175 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	FODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
6 COBB	1.75	17.50	.00	.00	14.00	2.00	.00	39.9	22.4
9 DAVIS	3.00	27.25	.00	.00	11.50	2.00	.00	41.9	20.6
2 RILLITO	1.75	7.75	.00	.00	12.25	2.00	.00	42.6	21.2
12 FRANKLIN	3.50	13.00	.00	.00	14.50	2.00	.00	36.9	22.9
7 JAMES	3.00	29.75	.00	.00	17.50	2.25	.00	40.0	22.3
15 CRAWFORD	2.50	18.50	.00	.00	20.50	2.00	.00		
8 FORREST	1.75	14.00	.00	.00	14.75	2.00	.00	40.4	19.0
5 RANSOM	4.00	24.00	.00	.00	12.25	2.00	.00	42.6	21.6
10 GASOY 17	3.25	24.75	.00	.00	11.25	2.00	.00	42.2	19.4
11 CALLAND	2.50	19.50	.00	.00	21.00	2.00	.00	40.3	19.4
14 BRAGG	4.25	35.50	.00	.00	11.25	2.00	.00	43.5	19.9
13 MITCHELL	3.00	20.00	.00	.00	23.00	2.00	.00	40.7	18.3
3 BOSSIER	3.25	13.25	.00	.00	13.25	2.25	.00	43.8	19.4
4 WILLIAMS	3.00	16.50	.00	.00	10.75	2.00	.00	41.1	20.6
1 IMPROVED FELICAN	4.25	26.75	.00	.00	13.50	2.00	.00	41.9	20.1
	GRAND MEAN	2.98	20.53	.00	.00	14.75	2.03	.00	
	STANDARD ERROR OF A VARIETY MEAN	*.62	5.66	.00	.00	*.63	*.09	.00	
	COEFFICIENT OF VARIATION	41.27%	55.18%	.00%	.00%	8.52%	9.09%	.00%	
	5% LSD VARIETY MEANS (*****=NS)	*****	*****	.00	.00	1.79	*****	.00	
	C O R R E L A T I O N S	(+ - PROB=.05	+ + - PROB=.01)						
	YIELD KG/HA	-.54++	-.15	.00	.00	-.06	-.06	.00	
	DAYS TO FLOWER	.06	.17	.00	.00	-.45++	.05	.00	
	DAYS TO MATURITY	.04	-.10	.00	.00	.09	.13	.00	
	NODULE ABUND 1	.00	.00	.00	.00	.00	.00	.00	
	NODULE ABUND 2	-.09	-.18	.00	.00	.55++	.16	.00	
	NODULE ACT. 1	.00	.00	.00	.00	.00	.00	.00	
	NODULE ACT. 2	.11	.21	.00	.00	-.57++	.17	.00	
	PLANT HEIGHT	.02	-.07	.00	.00	-.13	-.06	.00	
	LOGGING	.00	.00	.00	.00	.00	.00	.00	
	SHATTER	1.00	*.37++	.00	.00	-.15	.07	.00	
	PLANTS HARVEST	.37++	1.00	.00	.00	-.01	.18	.00	
	FODS PER PLANT	.00	.00	1.00	.00	.00	.00	.00	
	POD HEIGHT	.00	.00	.00	1.00	.00	.00	.00	
	100 SEED WEIGHT	-.15	-.01	.00	.00	1.00	.09	.00	
	QUALITY OF SEED	.07	.18	.00	.00	.08	.00	.00	
	PERCENT GERM.	.00	.00	.00	.00	.00	.00	1.00	

TABLE 52 EXPERIMENT 34 YEAR 1978

REGION - AFRICA
 SITE - TSCHANG
 LATITUDE - 5 DEG. 27 MIN. N
 COOPERATOR - I.R.A.F.
 DATE PLANTED - MARCH 22, 1979
 SOIL TYPE - SAND 43.4%, SILT 32.4%, CLAY 24.2%, PH 5.8

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
4	HARDEE LS	3061.03	42.00	124.00	3.00	.00	.00	.00	57.25	.00
1	CH-3	2690.12	34.00	116.00	4.00	.00	.00	.00	74.50	.00
6	IAC-2	2544.26	35.00	110.00	4.00	.00	.00	.00	70.75	.00
7	TUNIA	2492.16	30.00	108.00	4.00	.00	.00	.00	55.00	.00
10	IMPROVED PELICAN	2350.47	35.00	99.00	4.00	.00	.00	.00	50.75	.00
9	JUPITER	2321.30	39.00	127.00	4.00	.00	.00	.00	64.00	.00
5	ORBA	2308.79	35.00	99.00	2.50	.00	.00	.00	64.25	.00
3	SJ-2	2281.71	34.00	109.00	4.00	.00	.00	.00	55.00	.00
2	UFV-1	2171.27	34.00	102.00	3.00	.00	.00	.00	42.25	.00
11	KAHALA	1829.53	31.00	90.25	3.50	.00	.00	.00	49.00	.00
16	COBB	1779.52	27.00	88.00	2.50	.00	.00	.00	41.50	.00
8	CARIBE	1683.67	31.00	112.00	4.00	.00	.00	.00	50.75	.00
12	RILLITO	1652.41	27.00	89.00	3.50	.00	.00	.00	38.75	.00
14	WILLIAMS	1429.45	25.00	87.50	2.50	.00	.00	.00	35.25	.00
13	BOSSIER	1354.44	29.00	96.75	3.00	.00	.00	.00	30.75	.00
15	RANSOM	1148.15	25.00	88.00	2.50	.00	.00	.00	25.25	.00
STANDARD ERROR OF A VARIETY MEAN		2068.64	32.06	102.84	3.38	.00	.00	.00	50.31	.00
COEFFICIENT OF VARIATION		222.17	.00	.60	.38	.00	.00	.00	3.54	.00
5% LSD VARIETY MEANS (*****=NS)		21.48%	.00%	1.17%	22.74%	.00%	.00%	.00%	14.06%	.00%
5% LSD VARIETY MEANS (*****=NS)		632.82	.00	1.71	1.09	.00	.00	.00	10.07	.00

C O R R E L A T I O N S (+ = PROB=.05 ++ = PROB=.01)

YIELD KG/HA	1.00	*.68++	*.60++	*.24	*.00	*.00	*.00	*.00	*.71++	*.00
DAYS TO FLOWER	.68++	1.00	*.83++	*.27+	*.00	*.00	*.00	*.00	*.66++	*.00
DAYS TO MATURITY	.60++	*.83++	1.00	*.37++	*.00	*.00	*.00	*.00	*.66++	*.00
NODULE ABUND 1	*.24	*.27+	*.37++	1.00	*.00	*.00	*.00	*.00	*.36++	*.00
NODULE ABUND 2	*.00	*.00	*.00	1.00	*.00	*.00	*.00	*.00	*.00	*.00
NODULE ACT. 1	*.00	*.00	*.00	*.00	1.00	*.00	*.00	*.00	*.00	*.00
NODULE ACT. 2	*.00	*.00	*.00	*.00	*.00	1.00	*.00	*.00	*.00	*.00
PLANT HEIGHT	*.71++	*.66++	*.66++	*.36++	*.00	*.00	*.00	*.00	*.00	*.00
LODGING	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00
SHATTER	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00
PLANTS HARVEST	*.33++	*.06	-.02	-.10	*.00	*.00	*.00	*.00	*.33++	*.00
PODS PER PLANT	*.62++	*.67++	*.64++	*.24	*.00	*.00	*.00	*.00	*.56++	*.00
POD HEIGHT	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00
100 SEED WEIGHT	-.11	-.17	-.09	-.14	*.00	*.00	*.00	*.00	-.23	*.00
QUALITY OF SEED	-.30+	-.58++	-.38++	-.11	*.00	*.00	*.00	*.00	-.39++	*.00
PERCENT GERM.	.18	*.27+	*.13	*.00	*.00	*.00	*.00	*.00	*.18	*.00

TABLE 52 EXPERIMENT 34 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	HEIGHT	FOD	100 SEED OF SEED	QUALITY	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
4	HARDEE LS	*00	174.25	36.05	*00	19.10	1.75	100.00	40.5	20.9	20.5
1	CH-3	*00	209.50	30.95	*00	16.13	2.50	98.50	40.2	20.2	21.3
6	IAC-2	*00	254.50	28.00	*00	18.03	3.00	99.75	40.6	24.0	21.0
7	TUNIA IMPROVED FELICAN	*00	228.75	21.18	*00	17.83	2.75	100.00	36.2	38.9	21.2
10	JUPITER	*00	198.75	22.80	*00	14.73	2.00	99.75	38.9	19.0	19.0
9	ORBA	*00	159.00	22.05	*00	20.38	1.75	98.25	37.9	22.3	23.6
5	SJ-2	*00	276.50	24.35	*00	13.40	2.00	100.00	36.0	40.9	19.5
3	UFU-1	*00	169.25	30.18	*00	14.68	2.00	100.00	38.7	22.2	22.2
2	KAHALA	*00	232.75	20.65	*00	16.48	2.25	100.00	38.7	18.8	18.8
11	COBB	*00	176.00	21.93	*00	19.60	2.00	98.75	38.7	38.5	20.5
16	CARIBE	*00	211.25	17.33	*00	18.15	2.50	97.75	41.7	18.4	18.4
8	RILLITO	*00	190.75	26.70	*00	13.78	2.50	96.00	38.9	22.3	22.3
12	WILLIAMS	*00	195.25	18.35	*00	17.03	3.00	97.00	38.6	22.1	22.1
14	BOSSIER	*00	198.25	12.48	*00	19.40	3.25	96.75	40.3	21.6	21.6
13	RANSOM	*00	103.00	22.45	*00	18.85	3.50	98.00	41.6	23.6	23.6
15		*00	177.75	12.93	*00	20.43	3.00	99.75			
	GRAND MEAN	*00	197.22	23.02	*00	17.37	2.48	98.77			
	STANDARD ERROR OF A VARIETY MEAN	*00	20.95	2.25	*00	.65	.25	1.09			
	COEFFICIENT OF VARIATION	*00%	21.24%	19.56%	*00%	7.48%	19.86%	2.21%			
	5% LSD VARIETY MEANS (**NS=NS)	*00	59.67	6.41	*00	1.85	.70	*****			

CORRELATIONS (+ - FROB=.05 ++ - PROB=.01)

YIELD	KG/HA	*00	*33++	*62++	*00	-.11	-.30+	*18			
DAY'S TO FLOWER		*00	.06	*67++	*00	-.17	-.58++	*27+			
DAY'S TO MATURITY		*00	-.02	*64++	*00	-.09	-.38++	*13			
ODULE ABUND 1		*00	-.10	*24	*00	-.14	-.11	*00			
ODULE ABUND 2		*00	*00	*00	*00	*00	*00	*00			
ODULE ACT. 1		*00	*00	*00	*00	*00	*00	*00			
ODULE ACT. 2		*00	*00	*00	*00	*00	*00	*00			
PLANT HEIGHT		*00	*33++	*56++	*00	-.23	-.394+	*18			
LOGGING		*00	*00	*00	*00	*00	*00	*00			
SHATTER		1.00	*00	*00	*00	*00	*00	*00			
PLANTS HARVEST		*00	1.00	-.10	*00	-.28+	-.08	*04			
PODS PER PLANT		*00	-.10	1.00	*00	-.26+	-.26+	*13			
POD HEIGHT		*00	*00	*00	1.00	*00	*00	*00			
100 SEED WEIGHT		*00	-.28+	-.26+	*00	1.00	*00	*03			
QUALITY OF SEED		*00	-.08	-.28+	*00	*22	1.00	*22			
PERCENT GERM.		*00	*04	*13	*00	-.03	-.22	1.00			

TABLE 53 EXPERIMENT 32 YEAR 1978

REGION - AFRICA
 SITE - FOUMBOT
 LATITUDE - 5 DEG. 31 MIN. N
 COOPERATOR - I.R.A.F.
 DATE PLANTED - JULY 21, 1978
 SOIL PH 6.5
 AMOUNT OF MOISTURE - 1010 MM

COUNTRY - CAMEROON
ELEVATION - 1100 M
LONGITUDE - 10 DEG
DATE HARVESTED - NO

TABLE 53 EXPERIMENT 32 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
4 HARDEE LS		*.00 228.00	32.35	*.00	*.00	*.00	*.00
3 SJ-2		*.00 265.00	30.78	*.00	*.00	*.00	*.00
8 CARIBE		*.00 249.25	36.08	*.00	*.00	*.00	*.00
9 JUPITER		*.00 251.75	18.23	*.00	*.00	*.00	*.00
16 COBB		*.00 301.00	16.55	*.00	*.00	*.00	*.00
10 IMPROVED FELICAN		*.00 323.50	31.08	*.00	*.00	*.00	*.00
5 ORBA		*.00 261.50	28.10	*.00	*.00	*.00	*.00
2 UFV-1		*.00 266.00	13.75	*.00	*.00	*.00	*.00
1 CH-3		*.00 244.50	22.88	*.00	*.00	*.00	*.00
6 IAC-2		*.00 283.00	24.28	*.00	*.00	*.00	*.00
7 TUNIA		*.00 281.75	10.48	*.00	*.00	*.00	*.00
13 BOSSIER		*.00 298.25	12.20	*.00	*.00	*.00	*.00
15 RANSOM		*.00 299.75	7.70	*.00	*.00	*.00	*.00
11 KAHALA		*.00 302.50	7.48	*.00	*.00	*.00	*.00
12 RILLITO		*.00 267.50	9.48	*.00	*.00	*.00	*.00
14 WILLIAMS		*.00 319.00	6.50	*.00	*.00	*.00	*.00
GRAND MEAN							
STANDARD ERROR OF A VARIETY MEAN							
COEFFICIENT OF VARIATION							
5% LSD VARIETY MEANS (*****=NS)							
C O R R E L A T I O N S (4 - PROB=.05 4+ - PROB=.01)							
YIELD KG/HA							
DAYS TO FLOWER							
DAYS TO MATURITY							
NODULE ABUND 1							
NODULE ABUND 2							
NODULE ACT. 1							
NODULE ACT. 2							
PLANT HEIGHT							
LOGGING							
SHATTER							
HARVEST							
PLANTS PER PLANT							
POD HEIGHT							
100 SEED WEIGHT							
QUALITY OF SEED							
PERCENT GERM.							

TABLE 54 EXPERIMENT 33 YEAR 1973

REGION - AFRICA	COUNTRY - CAMEROON
SITE - SANTCHOU	ELEVATION - 700 M
LATITUDE - 5 DEG. N	LONGITUDE - 10 DEG. E
OPERATOR - IRAF	DATE HARVESTED - JULY, 1979
DATE PLANTED - MARCH 23, 1979	
SOIL TYPE - HYDROMORPHIC SUR PSEUDOGLY	
FERTILIZER USED (KG/HA) - N 20.0	

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
15	RANSOM	2481.75	26.25	84.00	.00	.00	.00	.00	40.75	.00
4	MARDEE LS	2287.96	41.00	103.25	.00	.00	.00	.00	76.25	.00
14	WILLIAMS	2235.86	27.50	79.25	.00	.00	.00	.00	65.25	.00
7	TUNIA	2140.01	29.50	97.00	.00	.00	.00	.00	55.00	.00
11	KAHALA	2017.07	27.75	78.75	.00	.00	.00	.00	70.25	.00
8	CARIBBE	1983.73	33.25	105.50	.00	.00	.00	.00	50.25	.00
2	UFV-1	1960.81	32.25	85.00	.00	.00	.00	.00	76.50	.00
9	JUPITER	1960.81	39.50	100.00	.00	.00	.00	.00	49.75	.00
13	FOSSIER	1927.47	32.25	85.50	.00	.00	.00	.00	71.50	.00
5	CREBA	1900.38	32.50	81.75	.00	.00	.00	.00	35.25	.00
16	COBB	1883.71	26.50	85.25	.00	.00	.00	.00	81.00	.00
6	IAC-2	1873.29	32.75	88.00	.00	.00	.00	.00	71.75	.00
10	IMPROVED FELICAN	1858.70	33.25	82.25	.00	.00	.00	.00	74.25	.00
3	SJ-2	1721.18	33.50	85.00	.00	.00	.00	.00	57.25	.00
12	RILLITO	1717.01	28.25	79.25	.00	.00	.00	.00	92.25	.00
1	CH-3	1454.46	33.00	99.25	.00	.00	.00	.00	1	.00
+ + -- PROB=.05										
+ + -- PROB=.01										
CORRELATIONS										
YIELD KG/HA	1.00	-.04	.03	.00	.00	.00	.00	.00	-.09	.00
DAYS TO FLOWER	-.04	1.00	.624+	.00	.00	.00	.00	.00	.624+	.00
DAYS TO MATURITY	.03	.624+	1.00	.00	.00	.00	.00	.00	.494+	.00
NODULE ABUND 1	.00	.00	.00	1.00	.00	.00	.00	.00	.00	.00
NODULE ABUND 2	.00	.00	.00	.00	1.00	.00	.00	.00	.00	.00
NODULE ACT. 1	.00	.00	.00	.00	.00	1.00	.00	.00	.00	.00
NODULE ACT. 2	.00	.00	.00	.00	.00	.00	1.00	.00	.00	.00
PLANT HEIGHT	-.09	.624+	.494+	.00	.00	.00	.00	.00	1.00	.00
LODGING	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.00
SHATTER	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
PLANTS HARVEST	.07	-.01	-.15	.00	.00	.00	.00	.00	.13	.00
PODS PER PLANT	.07	.454+	.30+	.00	.00	.00	.00	.00	.44+	.00
POD HEIGHT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
100 SEED WEIGHT	.30+	-.344+	-.21	.00	.00	.00	.00	.00	-.264	.00
QUALITY OF SEED GERM	-.08	-.24	-.324+	.00	.00	.00	.00	.00	-.08	.00

TABLE 54 EXPERIMENT 33 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	PODS PER PLANT	FOD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
15	RANSOM	.00	344.50	10.40	.00	19.70	3.00	.00	41.6
4	HARDEE LS	.00	338.50	14.05	.00	16.33	3.00	.00	40.5
14	WILLIAMS	.00	364.00	9.45	.00	19.35	4.00	.00	38.6
7	TUNIA	.00	334.75	9.98	.00	17.00	2.50	.00	36.2
11	KAHALA	.00	307.25	10.20	.00	20.48	3.50	.00	38.7
8	CARIBE	.00	281.75	15.60	.00	12.50	3.00	.00	41.7
2	UFV-1	.00	335.00	11.30	.00	13.93	2.00	.00	38.7
9	JUPITER	.00	342.50	17.88	.00	16.15	3.25	.00	37.9
13	BOSSIER	.00	260.25	12.23	.00	15.78	2.50	.00	40.3
5	ORBA	.00	329.50	16.85	.00	13.55	4.75	.00	36.0
16	COBB	.00	323.75	12.73	.00	15.83	3.50	.00	38.5
6	IAC-2	.00	334.25	14.03	.00	17.80	2.25	.00	40.6
10	IMPROVED FELICAN	.00	331.75	12.78	.00	13.65	3.75	.00	38.9
3	SJ-2	.00	355.25	18.25	.00	13.38	2.00	.00	40.9
12	RILLITO	.00	363.75	8.30	.00	14.25	5.00	.00	38.9
1	CH-3	.00	336.25	14.38	.00	14.85	3.00	.00	40.2
	GRAND MEAN	.00	330.63	13.03	.00	15.91	3.19	.00	
	STANDARD ERROR OF A VARIETY MEAN	.00	11.75	1.89	.00	.56	.22	.00	
	COEFFICIENT OF VARIATION	.00%	7.41%	2.902%	.00%	7.06%	13.73%	.00%	
	5% LSD VARIETY MEANS (*****=NS)	.00	33.46	5.38	.00	1.60	.62	.00	
	CORRELATIONS								
	YIELD KG/HA	.00	.07	.07	.00	*.30†	-.08		
	DAYS TO FLOWER	.00	-.01	*.45††	.00	-.34††	*.08		
	DAYS TO MATURITY	.00	-.15	.30†	.00	-.21	*.24		
	NODULE ABUND 1	.00	.00	.00	.00	*.00	-.32††		
	NODULE ABUND 2	.00	.00	.00	.00	*.00	*.00		
	NODULE ACT. 1	.00	.00	.00	.00	*.00	*.00		
	NODULE ACT. 2	.00	.00	.00	.00	*.00	*.00		
	PLANT HEIGHT	.00	.13	*.44††	.00	-.26††	*.06		
	LOGGING	.00	.00	.00	.00	*.00	*.00		
	SHATTER	1.00	.00	.00	.00	*.00	*.00		
	PLANTS HARVEST	.00	1.00	-.05	.00	*.11	*.20		
	PODS PER PLANT	.00	-.05	1.00	.00	*.27†	*.14		
	FOD HEIGHT	.00	.00	.00	1.00	*.00	*.00		
	100 SEED WEIGHT	.00	.11	-.27†	.00	1.00	-.03		
	QUALITY OF SEED	.00	.20	-.14	.00	-.03	1.00		
	PERCENT GERM.	.00	.00	.00	.00	*.00	1.00		

TABLE 55 EXPERIMENT 105 YEAR 1973

REGION - AFRICA
SITE - BANTEEM
LATITUDE - 30 DEG, 28 MIN. N
COOPERATOR - ALI ABDEL AZIZ
DATE PLANTED - MAY 7, 1978
SOIL TYPE - CLAY LOAM, PH 8.0
FERTILIZER USED (KG/HA) - N 28.6, P 53
LOCAL VARIETY - CLARK

COUNTRY -EGYPT ELEVATION - 24 M DATE HARVESTED SEPTEMBER, 1969
LONGITUDE - 34 DEG., 11 MIN. E

TABLE 55 EXPERIMENT 105 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	PODS PER PLANT	HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
16	CRAWFORD	1.00	213.25	54.00	8.75	15.45	2.00	.00	40.7
13	MICHAEL	1.00	200.00	46.35	10.00	17.08	2.25	.00	38.7
14	CLARK	1.00	210.75	37.60	7.25	17.65	2.00	.00	40.5
14	RILLITO	1.00	161.25	90.30	10.25	12.35	1.75	.00	41.6
11	FRANKLIN	1.00	207.00	42.03	9.75	16.70	1.50	.00	38.8
15	COLUMBUS	1.00	199.25	59.08	10.25	15.15	2.50	.00	41.5
8	DAVIS	1.00	163.75	85.15	8.75	14.30	1.50	.00	39.7
5	RANSOM	1.00	182.50	60.95	10.50	15.73	1.75	.00	41.2
12	CUTLER 71	1.00	195.75	42.25	9.75	17.90	2.00	.00	39.9
4	WILLIAMS	1.00	196.50	25.45	5.50	16.95	1.75	.00	40.7
10	CALLAND	1.00	198.50	43.80	9.25	17.58	3.00	.00	37.7
1	IMPROVED PELICAN	1.00	157.00	101.15	16.25	13.28	2.25	.00	44.4
7	FORREST	1.00	204.50	69.40	9.00	14.30	2.25	.00	41.1
3	BOSSIER	1.00	187.50	76.50	14.25	14.75	2.25	.00	42.5
9	GASOY 17	1.00	182.50	96.15	11.00	17.03	4.00	.00	42.1
6	COBB	1.00	181.75	82.80	12.75	15.30	2.00	.00	39.7
GRAND MEAN									
STANDARD ERROR OF A VARIETY MEAN									
COEFFICIENT OF VARIATION									
5% LSD VARIETY MEANS. (*****NS)									
CORRELATIONS (+ - PROB=.05)									
+ + - PROB=.01)									
YIELD	KG/HA	.00	.43++	-.30+	-.36++	.19	-.26+	.00	
DAYS TO FLOWER	.00	-.62++	.90++	.71++	-.51++	.12	.00		
DAYS TO MATURITY	.00	-.56++	.89++	.74++	-.44++	.18	.00		
NODULE ABUND 1	.00	.00	.00	.00	.00	.00	.00		
NODULE ABUND 2	.00	-.25+	.18	.07	-.16	.07	.00		
NODULE ACT. 1	.00	-.00	.00	.00	.00	.00	.00		
NODULE ACT. 2	.00	-.12	.18	.36++	-.05	.19	.00		
PLANT HEIGHT	.00	-.62++	.83++	.68++	-.45++	.02	.00		
LOGGING	.00	-.50++	.71++	.68++	-.29+	.13	.00		
SHATTER	1.00	.00	.00	.00	.00	.00	.00		
PLANTS HARVEST	.00	1.00	-.62++	-.35++	.36++	.03	.00		
PLANTS PER PLANT	.00	-.62++	1.00	.62++	-.52++	.19	.00		
POD HEIGHT	.00	-.35++	.62++	1.00	-.26+	.22	.00		
100 SEED WEIGHT	.00	.36++	-.52++	1.00	.22	.00	.00		
QUALITY OF SEED	.00	.03	.19	.00	.00	.00	.00		
PERCENT GERM.	.00	.00	.00	.00	.00	.00	.00		

TABLE 56 EXPERIMENT 126 YEAR 1978

REGION - AFRICA
 SITE - SAKHA
 LATITUDE - 31 DEG. N
 COOPERATOR - ALI ABDEL AZIZ
 DATE PLANTED - MAY 4, 1978
 SOIL TYPE - CLAY LOAM, FH 8.0
 FERTILIZER USED (KG/HA) - N 28.6, P 33.6
 NUMBER OF IRRIGATIONS - 8
 LOCAL VARIETY - CLARK

COUNTRY - EGYPT
 ELEVATION - 7 M
 LONGITUDE - 31 DEG. E
 DATE HARVESTED - AUGUST, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND.		NODULE ACT.		PLANT HEIGHT		LODGING
					1	2	1	2	1	2	
11	MICHELL	4488.40	39.25	113.75	*00	*00	*00	*00	*00	106.75	1.00
13	COLUMBUS	4146.66	34.75	130.75	*00	*00	*00	*00	*00	106.50	1.00
9	FRANKLIN	3992.46	33.00	106.00	*00	*00	*00	*00	*00	103.25	1.00
8	CALLAND	3946.62	35.75	107.25	*00	*00	*00	*00	*00	104.00	1.00
10	CUTLER 71	3934.12	36.50	111.50	*00	*00	*00	*00	*00	101.25	1.00
12	CLARK	3904.95	39.25	115.50	*00	*00	*00	*00	*00	103.75	1.00
3	WILLIAMS	3846.60	35.25	104.00	*00	*00	*00	*00	*00	90.00	1.00
5	JAMES	3292.32	47.50	112.00	*00	*00	*00	*00	*00	104.50	1.00
4	RANSOM	2950.59	74.50	165.25	*00	*00	*00	*00	*00	97.25	2.25
6	FORREST	2237.95	60.25	158.75	*00	*00	*00	*00	*00	95.00	1.25
1	RILLITO	1962.89	75.25	153.50	*00	*00	*00	*00	*00	105.00	1.00
7	DAVIS	1587.82	68.00	164.00	*00	*00	*00	*00	*00	101.00	2.00
2	BOSSTIER	1500.30	73.50	161.75	*00	*00	*00	*00	*00	93.75	3.00
STANDARD ERROR OF A VARIETY MEAN		3214.75	50.29	131.08	*00	*00	*00	*00	*00	100.92	1.35
COEFFICIENT OF VARIATION (%)		319.50	.57	.98	*00	*00	*00	*00	*00	3.93	*10
5% LSD VARIETY MEANS (*****NS)		19.88%	-	2.26%	1.50%	*00%	*00%	*00%	*00%	7.79%	14.77%
5% LSD VARIETY MEANS (*****NS)		916.40	1.63	2.81	*00	*00	*00	*00	*00	*****	*29
CORRELATIONS (+ - PROB=.05										+ + - PROB=.01)	
YIELD	KG/HA	1.00	-.78++	-.73++	*00	*00	*00	*00	*00	*00	*27+
DAYS TO FLOWER		1.00	-.92++	*00	*00	*00	*00	*00	*00	*18	*69++
DAYS TO MATURITY		-.73++	1.00	*00	*00	*00	*00	*00	*00	-.17	*70++
NODULE ABUND 1		.00	*00	1.00	*00	*00	*00	*00	*00	*00	*00
NODULE ABUND 2		*00	*00	*00	1.00	*00	*00	*00	*00	*00	*00
NODULE ACT. 1		*00	*00	*00	*00	1.00	*00	*00	*00	*00	*00
NODULE ACT. 2		*00	*00	*00	*00	*00	1.00	*00	*00	*00	*00
PLANT HEIGHT		-.27+	-.18	-.17	*00	*00	*00	*00	*00	*00	*30+
LODDING		-.57++	*69++	*70++	*00	*00	*00	*00	*00	*00	1.00
SHATTER		*00	*00	*00	*00	*00	*00	*00	*00	*00	*00
PLANTS HARVEST		*35++	-.38++	-.34+	*00	*00	*00	*00	*00	*08	*08
PODS PER PLANT		*52++	-.36++	-.49++	*00	*00	*00	*00	*00	*25	*25
POD HEIGHT		*00	*00	*00	*00	*00	*00	*00	*00	*00	*00
100 SEED WEIGHT		*79++	-.80++	-.79++	*00	*00	*00	*00	*00	*24	*48++
QUALITY OF SEED		-.39++	*41++	*37++	*00	*00	*00	*00	*00	*08	*13
PERCENT GERM.		.03	-.24	-.17	*00	*00	*00	*00	*00	*00	*13

TABLE 56 EXPERIMENT 126 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER HARVEST	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT OF SEED	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
11	Mitchell	1.00	84.00	67.50	.00	18.10	2.25	61.25	35.6	24.2
13	Columbus	1.00	155.75	34.25	.00	17.63	1.75	83.75	40.8	22.0
9	Franklin	1.00	152.00	34.50	.00	18.08	1.75	81.25	40.1	20.5
8	Galland	1.00	173.00	40.50	.00	19.90	2.75	85.00	40.4	21.3
10	Cutler 71	1.00	117.50	47.50	.00	21.15	2.25	78.75	39.6	22.5
12	Clark	1.00	107.00	45.25	.00	19.55	2.00	68.75	40.1	22.1
3	Williams	1.00	151.00	36.50	.00	19.65	1.25	78.75	40.9	22.8
5	James	1.00	130.50	59.75	.00	17.00	2.25	77.50	41.3	21.5
4	Ransom	1.00	145.50	37.00	.00	15.55	2.25	77.50	37.1	24.8
6	Forrest	1.00	92.25	19.00	.00	13.78	2.75	73.75	37.3	20.8
1	Rillito	1.00	89.25	28.75	.00	12.18	2.75	71.25	41.9	19.9
7	Davis	1.00	108.00	21.00	.00	13.00	2.50	76.25	37.4	22.0
2	Bossier	1.00	110.50	35.00	.00	13.00	2.50	71.25		
	GRAND MEAN	1.00	124.33	38.96	.00	16.81	2.23	75.77		
	VARIETY MEAN	.00	9.48	5.92	.00	.77	.27	2.43		
	COEFFICIENT OF VARIATION	.00%	15.25%	30.39%	.00%	9.18%	24.47%	6.42%		
	5% LSD VARIETY MEANS (*****=NS)	.00	27.19	16.98	.00	2.21	.78	6.98		

CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)

YIELD KG/Ha	.00	*354+	.524+	.00	.794+	-.394+	.03
DAYS TO FLOWER	.00	-.384+	-.364+	.00	-.804+	*.414+	-.24
DAYS TO MATURITY	.00	-.344+	-.494+	.00	-.794+	*.374+	-.17
NOODLE ABUND 1	.00	.00	.00	.00	.00	.00	.00
NOODLE ABUND 2	.00	.00	.00	.00	.00	.00	.00
NOODLE ACT. 1	.00	.00	.00	.00	.00	.00	.00
NOODLE ACT. 2	.00	.00	.00	.00	.00	.00	.00
PLANT HEIGHT	.00	-.08	.274	.00	.24	.08	-.00
LODGING	.00	-.08	-.25	.00	-.484+	.1.3	-.1.3
SHATTER	1.00	.00	.00	.00	.00	.00	.00
PLANTS HARVEST	.00	1.00	-.05	.00	.354+	-.22	*.634+
PODS PER PLANT	.00	-.05	1.00	.00	*.514+	-.06	-.26
POD HEIGHT	.00	.00	.00	1.00	.00	.00	.00
100 SEED WEIGHT	.00	*.354+	.514+	.00	1.00	-.354+	.1.3
QUALITY OF SEED	.00	-.22	-.06	.00	-.354+	1.00	-.1.3
PERCENT GERM.	.00	*.634+	-.26	.00	.13	-.1.3	1.00

TABLE 57 EXPERIMENT 129 YEAR 1978

REGION - AFRICA
 SITE - SEEDS
 LATITUDE - 29 DEG. N
 COOPERATOR - ALI ABDEL AZIZ
 DATE PLANTED - MAY 16, 1978
 FERTILIZER USED (KG/HA) - N 28.6, P 53.6
 SOIL TYPE -CLAY LOAM, PH 8.0
 NUMBER OF IRRIGATIONS - 9
 LOCAL VARIETY - CLARK

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LONGING
11	CALLAND	1654.50	33.75	93.75	59.50	39.50	1.03	1.14	56.25	1.00
8	FORREST	1333.60	48.75	122.50	52.75	63.00	1.32	1.11	61.25	1.25
9	DAVIS	1303.59	70.00	138.75	38.25	67.75	.98	.88	113.75	1.75
2	RILLITO	1071.05	73.75	135.00	71.50	85.25	1.59	1.34	106.75	2.00
13	CUTLER 71	983.53	36.25	100.00	44.00	82.25	.75	1.01	68.75	1.00
14	MICHELL	904.35	35.00	107.50	81.00	75.00	1.29	1.11	63.75	1.25
12	FRANKLIN	904.35	38.75	101.25	27.00	69.75	.64	.83	61.25	1.00
16	COLUMBUS	900.18	40.00	102.50	53.25	80.75	1.19	1.38	61.25	1.00
7	JAMES	871.01	50.00	112.50	93.25	84.50	1.56	1.12	78.75	1.00
15	CLARK	782.66	36.25	100.00	71.50	90.25	1.49	1.45	50.00	1.00
5	RANSOM	641.79	91.25	150.00	42.75	82.50	.90	1.07	93.75	1.75
4	WILLIAMS	612.62	35.00	101.25	31.00	81.75	1.03	1.14	55.00	1.00
-1	IMPROVED PELICAN	.00	98.75	175.00	22.50	58.50	.39	.67	127.50	3.00
10	GASOY 17	.00	75.00	175.00	35.75	76.00	.76	1.06	116.25	2.25
6	COBB	.00	73.75	175.00	17.00	50.00	.19	.38	88.75	2.00
3	BOSSIER	.00	72.50	161.25	41.25	97.00	1.09	1.16	101.25	2.25
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****NS)										
C O R R E L A T I O N S										
(+ = PROB=.05 - = PROB=.01)										
YIELD KG/HA										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE ABUND 1										
NODULE ABUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
PLANT HEIGHT										
LONGING										
SHATTER										
PLANTS HARVEST										
PODS PER PLANT										
POD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										

TABLE 57 EXPERIMENT 129 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	PODS PER PLANT	POD WEIGHT	100 SEED OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
11	CALLAND	1.00	197.50	20.00	.00	14.70	.00	.00
8	FORREST	1.00	192.00	38.35	.00	16.50	.00	.00
9	DAVIS	1.00	193.75	39.60	.00	12.93	.00	.00
2	RILLITO	1.00	194.50	34.85	.00	10.83	.00	.00
13	CUTLER 71	1.00	195.50	32.90	.00	15.55	.00	.00
14	MITCHELL	1.00	199.50	26.50	.00	13.18	.00	.00
12	FRANKLIN	1.00	197.50	13.00	.00	14.35	.00	.00
16	COLUMBUS	1.00	186.00	20.80	.00	12.98	.00	.00
7	JAMES	1.00	194.25	26.80	.00	11.48	.00	.00
15	CLARK	1.00	200.25	23.90	.00	14.73	.00	.00
5	RANSOM	1.00	194.25	25.20	.00	10.58	.00	.00
4	WILLIAMS	1.00	203.00	22.35	.00	12.58	.00	.00
1	IMPROVED FELICAN	1.00	179.50	15.45	.00	.00	.00	.00
10	GASOY 17	1.00	190.50	13.35	.00	.00	.00	.00
6	COBB	1.00	187.00	14.55	.00	.00	.00	.00
3	BOSSIER	1.00	185.75	14.35	.00	.00	.00	.00
GRAND MEAN		1.00	193.19	23.87	.00	10.02	.00	.00
STANDARD ERROR OF A VARIETY MEAN		.00	5.45	4.16	.00	*.20	.00	.00
COEFFICIENT OF VARIATION		.00%	5.64%	34.88%	.00%	3.92%	.00%	.00%
5% LSD VARIETY MEANS (*****=NS)		.00	*****	11.86	.00	.56	.00	.00
CORRELATIONS (+ = PROB=.05					+ + - PROB=.01)			
YIELD		.00	*31+	*54++	.00	*80++	.00	.00
DAYS TO FLOWER		.00	-*37++	-*1.1	.00	-*72++	.00	.00
DAYS TO MATURITY		.00	-*36++	-*.23	.00	-*87++	.00	.00
NODULE ABUND 1		.00	*15	.22	.00	*26+	.00	.00
NODULE ABUND 2		.00	*1.6	**.05	.00	*11	.00	.00
NODULE ACT. 1		.00	*1.8	*.18	.00	*23	.00	.00
NODULE ACT. 2		.00	*21	*.03	.00	*18	.00	.00
PLANT HEIGHT		.00	-*2.6+	**.01	.00	-*65++	.00	.00
LOGGING		.00	-*3.64+	**.20	.00	-*78++	.00	.00
SHATTER		1.00	*.00	.00	.00	*.00	.00	.00
PLANTS HARVEST		.00	1.00	*.04	.00	*38++	.00	.00
PODS PER PLANT		.00	*.04	1.00	.00	*48++	.00	.00
POD HEIGHT		.00	*.00	*.00	1.00	*.00	.00	.00
100 SEED WEIGHT		.00	*.38++	*.48++	.00	1.00	.00	.00
QUALITY OF SEED		.00	*.00	*.00	.00	1.00	.00	.00
PERCENT GERM.		.00	*.00	*.00	.00	*.00	.00	1.00

TABLE 58 EXPERIMENT 111 YEAR 1978

REGION - AFRICA
 SITE - SHEBIN EL NOM
 LATITUDE - 32 DEG. N
 COOPERATOR - DR. M.N. SHATLA
 DATE PLANTED - MAY 15, 1978

COUNTRY - EGYPT

LONGITUDE - 31 DEG. E

DATE HARVESTED - OCTOBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1		NODULE ABUND 2		PLANT HEIGHT	NODULE ACT. 1	NODULE ACT. 2	LODGING
					NODULE ABUND 1	NODULE ABUND 2	NODULE ABUND 1	NODULE ABUND 2				
8	DAVIS	4271.69	90.00	194.00	.00	.00	.00	.00	54.00	137.10	3.00	
9	GASOV 17	3979.96	90.00	199.00	.00	.00	.00	.00	59.00	9.00	127.23	4.00
15	COLUMBUS	3979.96	48.00	150.00	.00	.00	.00	.00	66.25	94.00	125.23	2.50
2	RILLITO	3896.61	76.75	202.00	.00	.00	.00	.00	50.00	87.50	161.85	4.50
13	MITCHELL	3667.40	46.00	150.00	.00	.00	.00	.00	25.00	47.00	114.78	3.50
7	FORREST	3646.56	61.00	154.00	.00	.00	.00	.00	25.00	42.75	126.68	2.50
10	CALLAND	3521.54	46.00	150.00	.00	.00	.00	.00	47.25	75.25	107.25	3.75
5	RANSOM	3500.70	72.00	202.00	.00	.00	.00	.00	53.50	27.25	129.48	1.75
16	CRAWFORD	3479.86	54.00	150.00	.00	.00	.00	.00	4.25	78.50	123.78	1.75
6	COBB	3438.19	96.50	199.50	.00	.00	.00	.00	41.75	50.75	130.83	3.25
3	BOSSIER	3188.14	85.50	202.00	.00	.00	.00	.00	65.00	23.50	163.90	3.75
14	BRAGG	3042.27	91.50	202.00	.00	.00	.00	.00	68.00	121.20	4.00	
4	WILLIAMS	3000.60	46.00	202.00	.00	.00	.00	.00	50.00	30.50	98.72	1.50
11	FRANKLIN	2854.74	46.00	150.00	.00	.00	.00	.00	33.25	35.75	119.65	3.25
12	CUTLER 71	2667.20	46.00	150.00	.00	.00	.00	.00	50.75	66.75	112.13	3.75
1	IMPROVED FELICAN	1937.89	112.00	202.00	.00	.00	.00	.00	8.25	25.00	204.33	5.00
GRAND MEAN				69.20	178.66	.00	.00	.00	39.13	55.78	131.51	3.23
STANDARD ERROR OF A VARIETY MEAN				369.81	2.77	1.27	.00	.00	21.21	17.64	5.04	.35
COEFFICIENT OF VARIATION				21.89%	8.00%	1.42%	.00%	.00%	108.41%	63.24%	7.67%	21.78%
5% LSD VARIETY MEANS (***(****=NS))				1053.39	7.98	3.62	.00	.00	*****	50.24	14.36	1.00
CORRELATIONS (+ - PROB=.05 + + - PROB=.01)												
YIELD KG/HA	1.00	-.10	-.06	.00	.00	.00	.00	.00	.17	-.00	-.13	-.02
DAYS TO FLOWER	-.10	1.00	-.76++	.00	.00	.00	.00	.00	-.12	-.31+	.674+	.40++
DAYS TO MATURITY	-.06	.76++	1.00	.00	.00	.00	.00	.06	-.06	-.42++	.44++	.17
NODULE ABUND 1	.00	.00	.00	1.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ABUND 2	.00	.00	.00	.00	1.00	.00	.00	.00	1.00	.00	.00	.00
NODULE ACT. 1	.17	-.12	.06	.00	.00	.00	.00	.00	.02	-.02	.09	.11
NODULE ACT. 2	-.00	-.31+	-.42++	.00	.00	.00	.00	.02	1.00	-.18	.04	.04
PLANT HEIGHT	-.13	.67++	.44++	.00	.00	.00	.00	-.09	-.18	1.00	.47++	.47++
LOGGING	-.02	.40++	.17	.00	.00	.00	.00	.14	.04	.04	1.00	
SHATTER	-.02	-.24	-.25+	.00	.00	.00	.00	.14	-.16	-.16	.20	
PLANTS HARVEST	-.15	-.63++	-.56++	.00	.00	.00	.00	.10	.28+	.48++	-.14	
PODS PER PLANT	-.07	.51++	.24	.00	.00	.00	.00	.16	-.14	.65++	.37++	
POD HEIGHT	-.39++	.31+	.06	.00	.00	.00	.00	.22	-.22	.52++	.32+	
100 SEED WEIGHT	.06	.06	.20	.00	.00	.00	.00	.02	-.10	-.19	.06	
QUALITY OF SEED	-.02	-.54++	-.61++	.00	.00	.00	.00	-.04	.27+	.45++	-.09	
GERM PERCENT	-.02	.75++	.49++	.00	.00	.00	.00	-.03	-.22	.65++	.30+	

TABLE 58 EXPERIMENT 111 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
8 DAVIS	1.00	113.25	65.25	6.53	17.58	1.00	84.00	41.5	21.7
9 GASOY 17	2.00	93.50	61.75	10.30	19.98	1.00	90.00	42.3	20.4
15 COLUMBUS	1.00	120.00	59.00	15.83	17.98	2.00	78.00	43.1	22.5
12 RILLITO	1.25	70.75	64.75	8.90	17.78	1.00	76.00	44.5	21.9
13 MITCHELL	1.50	117.00	45.00	12.68	18.45	2.00	56.00	39.0	23.7
7 FORREST	1.00	100.25	75.50	7.73	16.83	2.00	70.00	41.7	22.0
10 CALLAND	2.25	124.00	48.75	10.35	19.23	2.00	64.00	41.9	21.4
5 RANSOM	1.00	83.75	39.00	9.18	20.18	2.00	58.00	41.9	23.3
16 CRAWFORD	1.00	90.50	52.75	12.43	18.78	1.00	86.00	41.8	24.1
6 COBB	1.00	75.75	48.00	10.85	19.73	1.00	88.00	41.4	20.0
3 BOSSIER	2.00	75.25	81.50	11.05	19.50	1.00	100.00	43.1	21.8
14 BRAGG	1.00	78.00	67.25	9.80	21.73	2.00	78.00	42.9	20.5
4 WILLIAMS	1.00	116.75	31.75	7.03	18.75	1.00	62.00	41.9	24.9
11 FRANKLIN	2.50	143.25	34.50	12.43	18.20	2.00	54.00	38.8	24.1
12 CUTLER 71	1.50	135.25	46.75	14.90	18.95	2.00	60.00	42.7	22.0
1 IMPROVED PELICAN	1.00	67.75	154.50	47.78	16.55	1.00	100.00	42.8	22.2
STANDARD ERROR OF A VARIETY MEAN									
COEFFICIENT OF VARIATION									
5% LSD VARIETY MEANS (*****NS) .44									
C O R R E L A T I O N S (+ - PROB=.05 ++ - PROB=.01)									
YIELD	KG/HA	-.02	.15	-.07	-.39++	.06	-.02	-.02	-.02
DAYS TO FLOWER	- .24	-.63++	.51++	.31+	.06	.06	-.54++	.75++	.75++
DAYS TO MATURITY	- .25+	-.56++	.24	.06	.20	.20	-.61++	.49++	.49++
NODULE ABUND 1	.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ABUND 2	.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 1	.14	.10	.16	.22	.02	.02	-.04	-.03	-.03
NODULE ACT. 2	.08	.28+	.14	.22	-.10	-.10	.27+	.22	.22
PLANT HEIGHT	-.16	-.48++	.65++	.52++	-.19	-.19	-.45++	.65++	.65++
LODGING	.20	-.14	.37++	.32+	.06	.06	.09	.30+	.30+
SHATTER	1.00	.18	-.13	-.06	.04	.04	.16	-.17	-.17
PLANTS HARVEST	.18	1.00	-.35++	-.18	-.23	-.23	.41++	.53++	.53++
PODS PER PLANT	-.13	-.35++	1.00	-.44++	-.18	-.18	-.26+	.55++	.55++
POD HEIGHT	-.06	-.18	.44++	1.00	-.24	-.24	-.12	.32++	.32++
100 SEED WEIGHT	.04	-.23	-.18	-.24	1.00	1.00	.09	-.03	-.03
QUALITY OF SEED	.16	.41++	-.26+	-.12	.09	.09	1.00	-.71++	-.71++
PERCENT GERM.	-.17	-.53++	.55++	.32++	-.03	-.03	1.00	1.00	1.00

TABLE 59 EXPERIMENT 117 YEAR 1978

REGION - AFRICA
 SITE - AWASSA
 LATITUDE - 6 DEG. 25 MIN. N
 COOPERATOR - GASHAHUN WOLDE
 DATE PLANTED - JUNE 20, 1978
 SOIL TYPE - LOAMY
 FERTILIZER USED (KG/HA) - N 18.0, P 46.0

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
4	WILLIAMS	3031.86	46.00	116.00	4.00	3.75	90.00	70.00	46.50	2.75
14	MITCHELL	2838.07	46.00	113.00	4.25	4.25	76.25	72.50	46.10	2.50
5	RANSOM	2790.14	49.00	118.00	4.00	4.00	83.75	82.50	39.98	1.00
2	RILLITO	2667.20	55.00	123.00	4.00	4.25	87.50	78.75	60.85	3.50
13	CUTLER 71	2517.17	46.00	115.25	4.25	4.50	88.75	73.75	52.50	3.50
11	CALLAND	2431.74	47.00	115.00	4.25	4.25	90.00	96.25	48.25	2.25
6	COBB	2346.30	62.00	132.00	4.50	4.25	77.50	93.75	63.05	2.25
16	COLUMBUS	2154.60	47.00	114.00	4.25	3.75	95.00	92.50	59.80	2.75
9	DAVIS	2092.08	67.00	137.00	4.00	4.50	92.50	98.75	68.90	3.00
7	JAMES	2079.58	52.00	122.00	4.00	4.25	95.00	96.25	55.60	3.25
8	FORREST	1879.54	55.00	125.00	5.00	5.00	87.50	95.00	61.80	2.75
1	IMPROVED PELICAN	1616.99	85.00	154.00	5.00	5.00	95.00	62.50	121.60	3.00
3	BOSSIER	1404.45	63.00	132.00	4.25	4.00	78.75	85.00	66.35	2.75
10	GASOY 17	1250.25	49.00	118.00	4.75	4.25	82.50	95.00	44.70	2.00
12	FRANKLIN	1223.16	45.00	112.00	4.75	4.75	88.75	68.75	37.85	1.00
15	BRAGG	1112.72	52.00	122.00	4.75	4.75	91.25	88.75	50.55	2.50
STANDARD ERROR OF A VARIETY MEAN		2089.74	54.13	123.02	4.38	4.34	88.75	84.38	57.77	2.55
COEFFICIENT OF VARIATION		190.08	.00	.19	.17	.27	3.99	5.72	3.55	.44
5% LSD VARIETY MEANS (*****=NS)		18.19%	.00%	.30%	7.90%	12.22%	8.99%	13.56%	12.28%	34.54%
5% LSD VARIETY MEANS (*****=NS)		541.44	.00	.53	.49	.76	11.37	16.29	10.10	1.25

C O R R E L A T I O N S (+ = PROB=.05 ++ = PROB=.01)

YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	HEIGHT LODGING	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
1.00	-.25	-.24	-.49++	-.22	*.03	-.04	-.18	*.01	-.04	-.49++	*.20	*.21	*.03	*.01	*.01
	-.25	1.00	.99++	.23	*.26+	*.01	*.07	*.07	*.01	.51++	*.12	*.12	*.28+	*.56++	*.20
	-.24	.99++	1.00	.21	*.25+	*.03	*.05	*.05	*.02	.47++	*.01	*.01	*.02	*.86++	*.21
	-.24	.99++	.23	.21	*.00	*.46++	1.00	*.02	*.09	.65++	*.01	*.15	*.19	*.31+	*.03
	-.49++	.23	.21	*.00	*.16	*.16	*.06	*.06	*.06	.26++	*.17	*.17	*.19	*.14	*.07
	.25+	*.25+	*.03	*.02	*.09	*.06	*.18	*.18	*.06	.65++	*.19	*.19	*.23	*.31+	*.03
	*.25+	*.25+	.22	*.22	*.23	*.17	*.17	*.17	*.17	.36++	*.08	*.08	*.25+	*.59++	*.03
	*.46++	*.46++	*.01	*.03	*.03	*.07	*.14	*.14	*.14	.34++	*.17	*.17	*.25+	*.35++	*.02
	1.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	.29++	*.18	*.18	*.41++	*.22	*.06
	*.25+	*.48++	*.48++	*.17	*.25+	*.10	*.10	*.10	*.10	.51++	*.12	*.12	*.28+	*.56++	*.09
	*.51++	*.51++	*.47++	*.02	*.14	*.02	*.02	*.02	*.02	.65++	*.15	*.19	*.23	*.68++	*.20
	*.18	*.65++	*.65++	*.01	*.15	*.15	*.19	*.19	*.19	.60++	*.31+	*.31+	*.25+	*.59++	*.03
	*.32++	*.60++	*.60++	*.36++	*.28+	*.09	*.09	*.09	*.09	.34++	*.17	*.17	*.25+	*.35++	*.02
	*.34++	*.29++	*.31+	*.31+	*.08	*.08	*.08	*.08	*.08	.30++	*.03	*.03	*.25+	*.34++	*.01
	*.30++	*.15	.13	.09	*.09	*.09	*.09	*.09	*.09	.30++	*.03	*.03	*.25+	*.34++	*.01

TABLE 59 EXPERIMENT 117 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
4	WILLIAMS	.00	311.25	20.50	7.65	20.13	2.00
14	MICHELL	.00	284.25	23.25	6.75	19.78	1.00
5	RANSOM	.00	309.75	16.50	9.40	20.03	1.00
2	RILLITO	.00	257.75	24.00	8.85	19.53	2.00
13	CUTLER 71	.00	320.50	26.75	9.20	19.75	3.00
11	CALLAND	.00	309.00	22.25	7.65	20.55	2.00
6	COBB	.00	274.75	20.50	8.60	18.00	3.00
16	COLUMBUS	.00	288.00	28.25	7.15	18.95	3.00
9	DAVIS	.00	270.25	22.50	9.90	18.35	1.00
7	JAMES	.00	308.25	18.75	10.00	19.05	1.00
8	FORREST	.00	228.75	17.00	6.50	19.65	3.00
1	IMPROVED PELICAN	.00	250.00	44.25	18.35	13.30	3.00
3	BOSSIER	.00	234.00	27.50	10.20	19.10	4.00
10	GASOY 17	.00	278.00	13.50	6.85	19.60	2.00
12	FRANKLIN	.00	328.25	18.50	6.25	15.50	1.00
15	BRAGG	.00	238.25	11.00	9.65	19.93	4.00
STANDARD ERROR OF A VARIETY MEAN		.00	280.69	22.19	8.93	18.32	2.25
COEFFICIENT OF VARIATION		.00%	12.95	3.32	1.33	.51	.06
5% LSD VARIETY MEANS (*****=NS)		.00	9.23%	29.94%	29.80%	5.47%	.13%
		.00	36.90	9.46	3.79	1.47	.00
C O R R E L A T I O N S		(+ - PROB=.05		(+ - PROB=.01)			
YIELD	KG/HA	.00	.34++	.09	-.18	.32++	-.34++
DAYS TO FLOWER		.00	-.48++	.51++	.65++	-.60++	.29+
DAYS TO MATURITY		.00	-.48++	.47++	.65++	-.56++	.31+
NODULE ABUND 1		.00	-.17	.02	.01	-.36++	.31+
NODULE ABUND 2		.00	-.25+	.14	.15	-.28+	.09
NODULE ACT. 1		.00	+.10	.12	.19	-.08	-.08
NODULE ACT. 2		.00	-.18	-.28+	.23	*.25+	-.03
PLANT HEIGHT		.00	-.41++	.56++	.68++	-.59++	.03
LONGING		.00	-.20	.09	.20	*.03	.16
SHATTER		1.00	*.00	*.00	*.00	*.00	*.06
PLANTS HARVEST			1.00	*.00	-.27+	*.02	*.15
PODS PER PLANT			*.00	1.00	.26+	-.45++	*.23
POD HEIGHT			-.27+	*.26+	1.00	-.47++	*.25+
100 SEED WEIGHT			*.00	-.45++	-.47++	*.17	*.01
QUALITY OF SEED			*.00	*.02	*.17	-.01	-.22
PERCENT GERM.			*.00	-.50++	*.19	*.01	*.00
				*.23	*.01	-.22	-.52++
							1.00

TABLE 60 EXPERIMENT 130 YEAR 1978

REGION - AFRICA
 SITE - DEBRE-ZEIT
 LATITUDE - 9 DEG. N
 COOPERATOR - ALEMU MENGISTU

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING	CORRELATIONS		
											(+ - PROB=.05	(++ - PROB=.01)	
16	CRAWFORD	2004.57	.00	.00	1.50	.00	.78-.75	.00	63.25	1.25			
2	RILLITO	1961.64	.00	.00	1.75	.00	82.50	.00	63.25	1.00			
11	CALLAND	1952.47	.00	.00	2.50	.00	87.50	.00	45.50	1.00			
8	FORREST	1839.12	.00	.00	4.00	.00	81.25	.00	59.50	1.00			
14	MITCHELL	1786.19	.00	.00	3.50	.00	85.00	.00	48.00	1.00			
7	JAMES	1749.93	.00	.00	1.75	.00	90.00	.00	58.25	1.00			
13	CUTLER 71	1726.18	.00	.00	1.25	.00	80.00	.00	53.25	1.00			
4	WILLIAMS	1724.09	.00	.00	1.50	.00	76.25	.00	40.50	1.00			
15	BRAGG	1707.01	.00	.00	3.25	.00	100.00	.00	59.25	1.00			
3	BOSSIER	1700.76	.00	.00	2.00	.00	77.50	.00	71.25	2.50			
6	COBB	1614.49	.00	.00	2.50	.00	88.75	.00	63.75	1.00			
9	DAVIS	1399.86	.00	.00	2.25	.00	91.25	.00	72.75	1.50			
5	RANSOM	1370.69	.00	.00	1.50	.00	73.75	.00	42.50	1.00			
12	FRANKLIN	1229.83	.00	.00	3.00	.00	70.00	.00	40.50	1.00			
10	GASOY 17	1198.16	.00	.00	2.25	.00	83.75	.00	51.25	1.00			
1	IMPROVED PELICAN	891.01	.00	.00	4.00	.00	88.75	.00	83.00	3.00			
		STANDARD ERROR OF A VARIETY MEAN		1616.00	.00	2.41	.00	83.44	.00	57.23	1.27		
		COEFFICIENT OF VARIATION		177.91	.00	.38	.00	5.07	.00	2.21	.15		
		5% LSD VARIETY MEANS (**NS=NS)		22.02%	.00%	31.70%	.00%	12.15%	.00%	7.72%	2.42%		
		506.76		.00	1.09	.00	14.44	.00	.00	.42			
118-													
		C O R R E L A T I O N S		(+ - PROB=.05		++ - PROB=.01)							
		YIELD KG/HA		1.00	.00	-.19	.00	-.07	.00	-.01	-.28+		
		DAYS TO FLOWER		.00	1.00	.00	.00	.00	.00	.00	.00		
		DAYS TO MATURITY		.00	.00	1.00	.00	.00	.00	.00	.00		
		NODULE ABUND 1		-.19	.00	.00	.00	.00	.00	.00	.00		
		NODULE ABUND 2		.00	.00	1.00	.00	.00	.00	.00	.00		
		NODULE ACT. 1		-.07	.00	.00	.374+	.00	1.00	.00	-.09		
		NODULE ACT. 2		.00	.00	.00	.00	.00	1.00	.00	.00		
		PLANT HEIGHT		-.01	.00	.00	.14	.00	.00	.00	.00		
		LODGING		-.28+	.00	.00	.16	.00	-.09	.00	.00		
		SHATTER		.00	.00	.00	.00	.00	.00	.00	.00		
		PLANTS HARVEST		.15	.00	.00	.20	.00	.324+	.00	.424+		
		PODS PER PLANT		.19	.00	-.03	.00	-.13	.00	.24	-.02		
		POD HEIGHT		-.23	.00	.30+	.00	.18	.00	.784+	.764+		
		100 SEED WEIGHT		.28+	.00	-.18	.00	-.11	.00	-.644+	.594+		
		QUALITY OF SEED		-.11	.00	.02	.00	.06	.00	.11	.10		
		GERM PERCENT		.15	.00	.00	.404+	.00	.264	.00	.03	.304+	

TABLE 60 EXPERIMENT 130 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
16	CRAWFORD	1.00	103.75	54.50	3.75	13.48	3.50	91.75	43.7	17.4
2	RILLITO	1.00	98.75	51.25	4.00	14.13	2.25	84.50	42.9	15.5
11	CALLAND	1.00	117.75	44.50	3.75	14.95	2.75	89.75	42.0	16.1
8	FORREST	1.00	90.50	52.00	6.25	13.65	3.25	82.00	41.9	14.6
14	MITCHELL	1.00	70.50	42.00	4.25	14.40	3.25	80.25	43.0	14.4
7	JAMES	1.00	106.75	45.50	5.00	13.98	3.25	95.75	43.5	14.8
13	CUTLER 71	1.00	93.75	43.00	2.25	14.98	3.00	94.00	44.5	14.5
4	WILLIAMS	1.00	83.75	32.00	3.00	15.85	2.00	88.50	44.3	14.2
15	BRAGG	1.00	131.00	31.50	6.00	16.28	2.25	96.25	41.0	17.6
3	BOSSIER	1.00	96.50	42.25	12.25	11.03	2.25	79.50	42.2	16.2
6	COBB	1.00	105.00	52.50	8.00	11.70	2.25	82.75	42.9	15.8
9	DAVIS	1.00	117.75	45.75	9.00	12.10	2.25	89.50	41.3	14.7
5	RANSOM	1.00	98.75	43.50	3.50	15.48	3.50	88.50	42.5	14.6
12	FRANKLIN	1.00	91.50	41.00	3.00	13.83	2.00	88.50	41.9	13.0
10	GASOY 17	1.00	97.00	35.50	3.75	14.45	1.75	86.25	43.0	18.8
1	IMPROVED PELICAN	1.00	130.00	43.50	13.25	10.85	3.75	96.25	43.3	
	GRAND MEAN	1.00	102.06	43.77	5.69	13.82	2.72	84.48		
	STANDARD ERROR OF A VARIETY MEAN	.00	10.25	4.93	.74	.48	.38	3.76		
	COEFFICIENT OF VARIATION	.00%	20.08%	22.55%	26.16%	6.97%	27.79%	8.91%		
	5% LSD VARIETY MEANS (*****NS=NS)	.00	29.19	14.06	2.12	1.37	1.08	10.72		
	CORRELATIONS (+ - PROB=.05) (+ - PROB=.01)									
	YIELD KG/HA	.00	.15	.19	-.23	*.28+	-.11	-.15		
	DAYS TO FLOWER	.00	.00	.00	.00	.00	.00	.00		
	DAYS TO MATURITY	.00	.00	.00	.00	.00	.00	.00		
	NODULE ABUND 1	.00	.20	-.03	.30+	-.18	.02	.40++		
	NODULE ABUND 2	.00	.00	.00	.00	.00	.00	.00		
	NODULE ACT. 1	.00	.32++	-.13	.18	-.11	.06	.26+		
	NODULE ACT. 2	.00	.00	.00	.00	.00	.00	.00		
	PLANT HEIGHT	.00	.42++	.24	.78++	-.64++	.11	.03		
	LODGING	.00	.30+	-.02	.76++	-.59++	.10	.30+		
	SHATTER	1.00	.00	.00	.00	.00	.00	.00		
	PLANTS HARVEST	.00	1.00	-.07	.36++	-.20	-.10	-.03		
	PODS PER PLANT	.00	-.07	1.00	.09	-.34++	.23	-.10		
	POD HEIGHT	.00	.36++	.09	1.00	-.70++	.06	.05		
	100 SEED WEIGHT	.00	-.20	.34++	-.70++	1.00	-.06	.18		
	QUALITY OF SEED	.00	-.10	.23	.06	-.06	1.00	-.05		
	PERCENT GERM.	.00	-.03	-.10	.05	-.18	-.05	1.00		

TABLE 61 EXPERIMENT 19 YEAR 1978

REGION - AFRICA
 SITE - NTOUM
 LATITUDE - 0 DEG. 20 MIN. N
 COOPERATORS - VAN AMERONGEN, VAN DE PLAS
 DATE PLANTED - MARCH 23, 1978
 SOIL TYPE - SAND 22%, SILT 63.5%, CLAY 14.5%
 FERTILIZER USED (KG/HA) - N 30.0, P 30.0, K 60.0
 AMOUNT OF MOISTURE - 448 MM

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
11	RILLITO	2154.60	32.50	90.50	.00	.00	.00	.00	.00	.00
4	HARDEE LS	2071.25	40.00	113.75	.00	.00	.00	.00	.00	.00
8	CARIBE	1971.23	38.25	114.50	.00	.00	.00	.00	.00	.00
15	COBB	1868.25	30.00	97.75	.00	.00	.00	.00	.00	.00
10	IMPROVED PELICAN	1860.79	34.75	95.25	.00	.00	.00	.00	.00	.00
12	BOSSIER	1831.62	36.25	100.25	.00	.00	.00	.00	.00	.00
3	SJ-2	1744.10	35.50	94.75	.00	.00	.00	.00	.00	.00
9	JUPITER	1708.67	40.00	102.00	.00	.00	.00	.00	.00	.00
13	WILLIAMS	1685.75	32.25	90.25	.00	.00	.00	.00	.00	.00
6	JAC-2	1669.08	34.25	105.25	.00	.00	.00	.00	.00	.00
1	CH-3	1631.58	35.50	105.50	.00	.00	.00	.00	.00	.00
14	RANSOM	1583.65	31.75	93.75	.00	.00	.00	.00	.00	.00
2	UFU-1	1579.48	34.00	103.25	.00	.00	.00	.00	.00	.00
5	ORBA	1523.22	31.75	93.75	.00	.00	.00	.00	.00	.00
7	TUNIA	1260.67	31.50	103.75	.00	.00	.00	.00	.00	.00
16	GASOY 17	1043.96	30.75	89.75	.00	.00	.00	.00	.00	.00
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION (%)										
5% LSD VARIETY MEANS (*****NS)										
CORRELATIONS (+ - PROB=.05 ++ - FROB=.01)										
YIELD KG/HA	1.00	*.21	*.21	*.00	*.00	*.00	*.00	*.00	*.00	*.00
DAYS TO FLOWER	.21	1.00	*.55++	*.00	*.00	*.00	*.00	*.00	*.00	*.00
DAYS TO MATURITY	.21	*.55++	1.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00
NODULE ABUND 1	.00	*.00	1.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00
NODULE ABUND 2	.00	*.00	*.00	1.00	*.00	*.00	*.00	*.00	*.00	*.00
NODULE ACT. 1	.00	*.00	*.00	*.00	1.00	*.00	*.00	*.00	*.00	*.00
NODULE ACT. 2	.00	*.00	*.00	*.00	*.00	1.00	*.00	*.00	*.00	*.00
PLANT HEIGHT	*.48++	*.54++	*.51++	*.00	*.00	*.00	1.00	*.00	*.00	*.00
LOGGING	*.20	*.18	*.16	*.00	*.00	*.00	*.00	*.00	*.00	*.00
SHATTER	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00
PLANTS HARVEST	*.23	*.18	*.25+	*.00	*.00	*.00	*.00	*.00	*.00	*.00
PODS PER PLANT	*.35++	*.44++	*.46++	*.00	*.00	*.00	*.00	*.00	*.00	*.01
POD HEIGHT	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00
100 SEED WEIGHT	*.23	*.21	*.20	*.00	*.00	*.00	*.00	*.00	*.00	*.00
QUALITY OF SEED	*.09	*.10	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.03
PERCENT GERM.	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00

TABLE 61 EXPERIMENT 19 YEAR 1973 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
11 RILLITO		*.00	177.00	25.83	*.00	17.90	2.00	*.00	44.6
4 HARDEE LS		*.00	150.00	36.30	*.00	20.80	1.75	*.00	44.7
8 CARIBE		*.00	161.00	54.18	*.00	16.58	2.00	*.00	47.9
15 COBB		*.00	187.50	19.78	*.00	18.53	2.00	*.00	41.4
10 IMPROVED PELICAN		*.00	159.00	32.13	*.00	17.95	2.00	*.00	46.6
12 BOSSIER		*.00	162.50	23.00	*.00	18.98	2.50	*.00	45.0
3 SJ-2		*.00	161.75	30.40	*.00	16.58	2.50	*.00	44.4
9 JUFITER		*.00	126.75	40.75	*.00	21.98	1.50	*.00	44.6
13 WILLIAMS		*.00	177.25	14.55	*.00	20.98	2.75	*.00	43.5
6 IAC-2		*.00	140.50	29.05	*.00	20.53	2.00	*.00	47.0
1 CH-3		*.00	157.75	40.40	*.00	16.63	2.25	*.00	45.0
14 RANSOM		*.00	170.00	15.30	*.00	18.80	2.00	*.00	42.9
2 UFV-1		*.00	154.00	24.78	*.00	17.68	2.50	*.00	44.7
5 ORBA		*.00	199.75	22.63	*.00	16.05	2.00	*.00	45.1
7 TUNIA		*.00	93.75	32.28	*.00	21.43	2.50	*.00	43.6
16 GASOY 17		*.00	157.75	13.25	*.00	16.90	1.50	*.00	41.7
GRAND MEAN		*.00	157.89	28.41	*.00	18.64	2.11	*.00	
STANDARD ERROR OF A VARIETY MEAN		*.00	18.22	5.50	*.00	*.66	*.29	*.00	
5% LSD COEFFICIENT OF VARIATION		*.00%	23.08%	38.71%	*.00%	7.13%	27.21%	*.00%	
5% LSD VARIETY MEANS (*****NS)		*.00	51.90	15.66	*.00	1.89	*****	*.00	
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)									
YIELD	KG/HA	*.00	*.23	*.35++	*.00	*.23	*.09	*.00	
DAYS TO FLOWER		*.00	-.18	*.44++	*.00	*.21	-.10	*.00	
DAYS TO MATURITY		*.00	-.25+	*.46++	*.00	*.20	-.10	*.00	
NODULE ABUND 1		*.00	*.00	*.00	*.00	*.00	*.00	*.00	
NODULE ABUND 2		*.00	*.00	*.00	*.00	*.00	*.00	*.00	
NODULE ACT. 1		*.00	*.00	*.00	*.00	*.00	*.00	*.00	
NODULE ACT. 2		*.00	*.00	*.00	*.00	*.00	*.00	*.00	
PLANT HEIGHT		*.00	-.04	*.63++	*.00	*.06	-.09	*.00	
LODGING		*.00	*.01	*.46++	*.00	-.30+	*.03	*.00	
SHATTER		1.00	*.00	*.00	*.00	*.00	*.00	*.00	
PLANTS HARVEST		*.00	1.00	-.05	*.00	-.35++	-.14	*.00	
PODS PER PLANT		*.00	-.05	1.00	*.00	*.05	-.07	*.00	
POD HEIGHT		*.00	*.00	*.00	1.00	*.00	*.00	*.00	
100 SEED WEIGHT		*.00	-.35++	.05	*.00	1.00	*.15	*.00	
QUALITY OF SEED		*.00	-.14	-.07	*.00	*.15	1.00	*.00	
PERCENT GERM.		*.00	*.00	*.00	*.00	*.00	1.00		

TABLE 62 EXPERIMENT 8 YEAR 1978

REGION - AFRICA
 SITE - KUMASI
 LATITUDE - 6 DEG. 41 MIN. N
 COOPERATOR - HECTOR MERCER-QUARSHIE
 DATE PLANTED - MAY 17, 1978
 SOIL TYPE - SILT, PH 6.3
 FERTILIZER USED (KG/HA) - N 25.0, P 25.0, K 25.0
 AMOUNT OF MOISTURE - 1207 MM
 SUBSTITUTE VARIETY - HARDEE

COUNTRY - GHANA
 ELEVATION - 270 M
 LONGITUDE - 1 DEG. 42 MIN. W
 DATE HARVESTED - SEPTEMBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
2	UFU-1	1815.78	32.75	105.75	4.00	3.75	90.00	85.00	52.75	1.50
13	FOSSIER	1783.27	31.00	101.25	3.75	3.75	81.25	83.75	63.50	2.50
6	IAC-2	1727.43	31.00	107.00	4.00	4.00	88.75	75.00	71.50	2.25
4	HARDEE LS	1678.25	41.00	110.00	3.25	3.25	90.00	92.50	70.50	1.50
7	TUNIA	1533.64	24.50	107.75	4.00	4.00	98.75	100.00	53.25	1.25
5	ORBA	1465.71	31.00	98.50	3.25	3.50	92.50	97.50	63.50	2.75
10	IMPROVED FELICAN	1444.87	31.00	99.50	3.50	3.75	90.00	85.00	71.50	2.25
16	HARDEE	1382.36	22.00	96.00	3.50	4.00	98.75	97.50	45.50	1.25
12	RILLITO	1256.50	23.25	82.00	4.00	3.75	92.50	93.75	55.00	1.50
9	JUPITER	1237.33	42.00	104.50	4.00	3.50	93.75	96.25	78.25	2.50
15	RANSOM	1236.08	22.00	87.00	3.75	4.00	95.00	93.75	40.75	1.25
3	SJ-2	1205.24	33.00	104.50	3.75	4.00	87.50	83.75	65.75	2.50
14	WILLIAMS	1117.72	20.00	75.00	2.50	4.00	93.75	95.00	54.00	1.00
-122-	CH-3	1070.21	30.00	108.75	3.00	2.75	91.25	90.00	81.25	3.50
11	KAHALA	853.09	23.00	75.00	1.50	3.50	91.25	91.25	48.50	1.25
8	CARIBE	841.83	37.00	131.00	3.75	4.00	92.50	92.50	82.50	3.25
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION (%)										
5% LSD VARIETY MEANS (*****NS)										
C O R R E L A T I O N S (+ = PROB=.05 +* = PROB=.01)										
YIELD KG/HA	.100	.15	.11	.29+	-.04	-.19	-.29+	.02	.02	
DAYS TO FLOWER	.15	1.00	.72++	.26+	-.12	-.18	-.19	.48++	.48++	
DAYS TO MATURITY	.11	.72++	1.00	.43++	.00	-.03	-.15	.52++	.52++	
NODULE ABUND 1	.29+	.26+	.43++	1.00	.12	.09	-.12	.14	.08	
NODULE ABUND 2	-.04	-.12	.00	.12	1.00	-.08	-.07	-.15	-.13	
NODULE ACT. 1	-.19	-.18	-.03	.09	-.06	1.00	.44++	-.13	-.30+	
NODULE ACT. 2	-.29+	-.19	-.15	-.12	-.07	.44++	1.00	-.26+	-.26+	
PLANT HEIGHT	.02	.72++	.65++	.14	-.15	-.13	-.26+	1.00	.68++	
LODGING	.02	.48++	.52++	.08	-.13	-.30+	-.26+	.68++	1.00	
SHATTER	.00	.00	.00	.00	.00	.00	.00	.00	.00	
PLANTS HARVEST	-.16	-.40++	-.45++	-.29+	-.02	-.14	-.11	-.21	.04	
PODS PER PLANT	.26+	.44++	.25+	.25+	-.02	.00	.13	.21	-.02	
POD HEIGHT	.39++	.52++	.27+	.07	-.14	-.27+	-.38+	.44++	.33++	
100 SEED WEIGHT	.37++	-.31+	-.42++	.10	.08	-.13	-.02	-.42++	-.42++	
QUALITY OF SEED	-.47++	.41++	.52++	.02	.15	.02	.17	.33++	.31+	
GERM. PERCENT	.02	.14	.22	.07	.17	.07	.16	.16	.16	

TABLE 62 EXPERIMENT 8 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
2	UFV-1	1.00	168,25	20.00	17.75	19.00	1.50	62.75	45.7	22.3
13	BOSSIER	1.00	197,75	27.50	19.00	21.00	1.75	60.00	44.2	23.2
6	TAC-2	1.00	165,00	24.25	21.25	19.75	1.50	57.75	43.8	23.2
4	HARDEE LS	1.00	86,25	48.00	16.75	17.75	2.00	61.75	44.5	22.9
7	TUNIA	1.00	71,50	32.50	13.75	20.75	2.00	93.50	45.7	21.5
5	ORBA	1.00	196,25	20.75	17.25	18.00	1.75	75.50	44.5	20.6
10	IMPROVED PELICAN	1.00	199,25	22.25	18.50	19.75	1.25	64.00	46.4	22.0
16	HARDEE	1.00	194,25	24.00	10.25	21.00	1.50	57.00	43.0	22.4
12	RILLITO	1.00	176,75	29.25	11.00	19.50	1.25	55.25	45.5	21.7
9	JUPITER	1.00	143,00	37.25	20.50	20.50	2.50	77.25	43.6	20.4
15	RANSOM	1.00	195,75	34.00	9.50	19.50	1.75	60.50	42.5	24.7
3	SJ-2	1.00	136,25	24.25	17.00	17.00	1.75	80.25	44.1	21.7
14	WILLIAMS	1.00	238,25	18.00	10.25	18.25	1.00	57.00	43.7	21.8
1	CH-3	1.00	153,00	35.25	17.00	17.75	2.00	66.50	44.9	20.2
11	KAHALA	1.00	219,50	20.50	13.75	19.00	2.00	73.75	45.6	18.4
8	CARIBE	1.00	190,00	24.75	10.00	13.00	3.50	75.00	47.2	19.0
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
CORRELATIONS (4 = PROB=.05 44 = PROB=.01)										
YIELD KG/Ha										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE ABUND 1										
NODULE ABUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
PLANT HEIGHT										
LOGGING										
SHATTER										
PLANTS HARVEST										
PODS PER PLANT										
POD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										

TABLE 63 EXPERIMENT 23 YEAR 1978

REGION - AFRICA
 SITE - KUMASI
 LATITUDE - 6 DEG. 42 MIN. N
 COOPERATOR - Y.B. NIMOH
 DATE PLANTED - MAY 22, 1978
 SOIL TYPE - SAND 59.2%, SILT 12.0%, CLAY 7.8%, PH 5.0
 FERTILIZER USED (KG/HA) - N 25.0, P 26.4, K 24.9

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
11	RILLITO	1122.31	26.00	8.00	2.75	3.25	97.50	93.75	41.53	1.50
6	IAC-2	1097.30	32.00	24.75	3.75	3.75	96.25	88.75	54.53	1.00
3	SJ-2	1021.45	34.25	18.00	3.75	3.25	100.00	93.75	53.65	2.25
9	JUPITER	997.28	45.00	35.50	2.50	2.50	92.50	73.75	64.20	1.25
10	IMPROVED PELICAN	965.53	33.50	15.00	3.25	2.75	96.25	87.50	56.20	1.50
12	BOSSIER	955.19	33.00	13.50	3.75	3.50	97.50	92.50	50.40	1.50
7	TUNIA	765.15	28.00	23.50	4.00	4.00	95.00	95.00	43.23	1.00
5	ORBA	747.23	32.00	11.00	2.75	3.25	96.25	91.25	52.33	1.75
1	CH-3	695.14	33.00	22.50	3.25	3.50	100.00	94.25	60.45	1.75
4	HARDEE LS	692.22	44.00	42.00	3.75	2.75	83.75	76.25	52.15	1.25
2	UFV-1	677.22	33.00	29.00	3.50	3.50	91.25	80.00	29.18	1.00
15	COBB	655.96	24.00	12.50	3.50	3.00	97.50	86.25	27.78	1.25
13	WILLIAMS	544.69	22.00	9.00	3.50	3.50	95.00	90.00	38.20	1.75
14	RANSOM	535.11	23.00	8.00	3.25	3.50	92.50	98.75	26.25	1.25
16	GASOY 17	529.19	22.00	8.00	3.25	3.25	91.25	93.75	28.75	1.00
8	CARIBE	324.23	37.75	42.00	3.25	2.75	93.75	92.50	68.53	1.25
STANDARD ERROR OF A VARIETY MEAN										
31.41										
119.73										
31.09%										
341.04										
5% LSD VARIETY MEANS (*****NS)										
4.73										

1.39										
2.27										
39.50%										
6.51 *****										
CORRELATIONS (+ - PROB=.05 + + - PROB=.01)										
YIELD KG/HA										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE ABUND 1										
NODULE ABUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
PLANT HEIGHT										
LOGGING										
SHATTER										
PLANTS HARVEST										
PODS PER PLANT										
POD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										

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YIELD KG/HA	1.00	1.15	-.08	.16	.13	.19	-.12	.25	.1.2
DAYS TO FLOWER	.05	.01	.81++	.08	-.35++	-.15	-.55++	.71++	.01
DAYS TO MATURITY	-.08	.00	1.00	.18	-.29+	-.24	-.48++	.51++	-.22
NODULE ABUND 1	.16	.08	.18	1.00	.27+	.13	-.09	.08	-.01
NODULE ABUND 2	.13	-.35++	-.29+	.27+	1.00	.19	-.33++	-.14	.03
NODULE ACT. 1	.19	-.15	-.21	-.13	.19	1.00	.19	.08	.17
NODULE ACT. 2	-.12	-.55++	-.48++	-.09	.33++	.19	1.00	-.20	.00
PLANT HEIGHT	.25	.71++	.51++	.08	-.14	.08	-.20	1.00	.31+
LOGGING	.12	.01	.22	-.22	-.03	.17	.00	.31+	1.00
SHATTER	-.05	-.35++	-.24	.20	-.14	-.23	-.26+	.45	.00
PLANTS HARVEST	-.08	-.41++	-.56++	-.18	.15	.09	.28+	-.24	.1.2
PODS PER PLANT	.10	.69++	.74++	.04	-.28+	-.14	-.41++	-.49++	-.12
POD HEIGHT	.28	.51++	.15	-.02	-.06	.18	-.09	-.74++	.30+
100 SEED WEIGHT	.23	-.04	.05	.14	.08	-.14	-.22	-.20	-.29+
QUALITY OF SEED	-.31+	-.45++	-.34++	-.12	.04	-.02	-.54++	-.21	.03
PERCENT GERM.	-.08	.02	.06	-.19	-.05	-.03	-.08	.01	.03

TABLE 63 EXPERIMENT 23 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	HEIGHT	FOD	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
11 RILLITO	1.00	118.00	31.75	7.90	22.93	2.00	100.00		
6 IAC-2	1.00	137.50	30.00	13.68	20.80	2.5	100.00		
3 SJ-2	1.00	137.50	33.75	14.08	17.40	1.75	95.00		
9 JUPITER	1.00	86.25	40.50	17.40	25.40	2.00	100.00		
10 IMPROVED PELICAN	1.00	149.50	30.00	13.78	20.15	2.00	92.50		
12 BOSSIER	1.50	144.25	19.50	13.90	19.45	2.00	97.50		
7 TUNIA	1.00	34.00	37.75	9.28	24.88	1.25	92.50		
5 ORBA	1.00	196.00	25.50	15.63	17.03	2.50	100.00		
1 CH-3	1.00	133.00	23.75	14.98	17.60	2.00	97.50		
4 HARDEE LS	1.75	65.75	55.75	9.65	20.43	2.25	100.00		
2 UFV-1	1.00	135.50	27.50	7.40	20.73	2.50	97.50		
15 COBB	1.00	137.75	23.25	8.73	19.98	3.25	100.00		
13 WILLIAMS	1.00	166.00	14.00	9.75	21.70	3.25	100.00		
14 RANSOM	1.00	178.75	14.50	8.73	22.53	3.50	95.00		
16 GASOY 17	1.00	170.75	18.35	9.30	18.85	3.00	100.00		
8 CARIBE	1.00	102.75	41.25	12.45	16.98	2.00	97.50		
STANDARD ERROR OF A VARIETY MEAN	1.08	130.84	29.51	11.66	20.44	2.36	97.81		
STANDARD COEFFICIENT OF VARIATION	.10	16.62	3.67	.80	.60	.25	2.39		
5% LSD VARIETY MEANS (*****NS)	.18.04%	25.40%	24.90%	13.78%	5.83%	21.15%	4.89%		
	.28	47.33	10.46	2.29	1.70	.71	*****		
CORRELATIONS (+ - PROB=.05) ++ - FROB=.01)									
YIELD	KG/HA	-.05	-.08	.10	.28+	.23	-.31+	-.08	
DAYS TO FLOWER	*35++	-.41++	.69++	*51++	-.04	-.45++	*.02		
DAYS TO MATURITY	*24	-.56++	.74++	*15	*.05	-.34++	*.06		
NODULE ABUND 1	*20	-.18	.04	-.02	*14	-.12	-.19		
NODULE ABUND 2	-.11	*15	-.28+	-.06	*.08	*.04	-.07		
NODULE ACT. 1	-.28+	.09	-.14	*.18	-.14	-.09	*.05		
NODULE ACT. 2	-.26+	*28+	-.41++	-.09	-.22	*.03	-.08		
PLANT HEIGHT	*15	-.24	.48++	*74++	-.20	-.54++	*.01		
LODGING	*00	*12	-.12	*30+	-.29+	-.21	-.03		
SHATTER	1.00	-.22	.23	.02	-.05	*.14	*.13		
PLANTS HARVEST	-.22	1.00	-.69++	.08	-.37++	*.49++	*.16		
PLANTS PER PLANT	*23	-.69++	1.00	.09	*.13	*.42++	*.01		
FOD HEIGHT	*02	*08	.09	1.00	-.25+	1.00	-.09		
100 SEED WEIGHT	-.05	-.37++	.13	-.25+	.03	.03	-.04		
QUALITY OF SEED	-.14	*49++	-.42++	-.27+	*.03	1.00	*.09		
PERCENT GERM.	.13	.16	.01	-.09	-.04	.09	1.00		

TABLE 64 EXPERIMENT 79 YEAR 1978

REGION - AFRICA
 SITE - CHITIPA
 LATITUDE - 9 DEG. 46 MIN. S
 COOPERATOR - P.K. SIBALE
 DATE PLANTED - JANUARY 19, 1979
 FERTILIZER USED (KG/HA) - N 25.0, P 26.4, K 24.9
 AMOUNT OF MOISTURE - 801 MM
 NUMBER OF IRRIGATIONS - 2

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
15	DAVIS	3782.01	45.00	104.00	3.75	1.75	77.50	38.75	37.00	1.00
11	BOSSIER	3771.59	45.00	101.00	3.75	2.25	72.50	23.75	53.75	1.75
5	ORBA	3406.93	48.00	101.00	3.50	2.25	73.75	32.50	70.25	2.75
7	TUNIA	45.00	3313.16	113.00	4.00	2.00	61.25	51.25	53.75	1.25
4	HARDEE LS	3279.15	59.00	122.00	4.00	2.50	68.75	37.50	61.75	1.25
1	CH-3	3219.39	47.00	109.00	4.00	2.25	66.25	37.50	85.00	2.50
10	IMPROVED PELICAN	3198.56	49.00	104.00	4.00	2.75	56.25	42.50	65.00	1.25
6	IAC-2	3115.21	47.00	109.00	4.00	2.00	67.50	58.75	60.00	1.00
14	COBB	3115.21	38.00	92.00	4.00	2.50	72.50	46.25	36.75	1.00
12	WILLIAMS	3063.11	34.00	88.00	3.25	2.50	88.75	77.50	39.75	1.00
13	RANSOM	3063.11	34.00	92.00	3.00	1.75	83.75	73.75	29.00	1.00
8	CARIBE	3042.27	45.25	105.00	3.75	3.00	71.25	33.75	65.50	2.25
9	JUPITER	2969.34	47.00	122.00	4.25	2.75	23.75	85.00	69.00	2.00
3	SJ-2	2719.29	49.00	109.00	4.00	2.00	82.50	52.50	66.25	2.00
16	GASOY 17	2531.76	36.00	92.00	3.75	2.00	61.25	58.75	26.50	1.00
2	UFU-1	2292.12	47.00	113.00	4.00	2.25	57.50	46.25	26.50	1.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****NS)										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD KG/HA										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE ABUND 1										
NODULE ABUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
PLANT HEIGHT										
LOGGING										
SHATTER										
PLANTS HARVEST										
PODS PER PLANT										
FOD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										

TABLE 64 EXPERIMENT 79 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
15 DAVIS	1.00	215.25	23.00	9.25	22.50	2.25	98.50	44.3	19.9	
11 BOSSIER	1.00	203.50	25.50	15.00	21.25	2.00	99.25	45.0	18.3	
11 DRBA	1.50	187.50	31.00	17.75	15.00	1.50	97.75	40.7	16.8	
5 TUNIA	1.00	193.00	23.50	16.75	23.75	2.50	99.25	41.7	19.8	
7 HARDEE LS	1.00	169.25	48.25	14.50	15.00	2.00	81.50	40.9	20.0	
4 CH-3	1.00	219.50	34.00	16.00	15.00	2.00	98.00	42.8	19.7	
1 IMPROVED PELICAN	1.00	233.25	32.25	14.25	16.25	1.00	99.00	44.9	19.4	
10 IAC-2	1.00	215.00	29.75	12.50	20.00	2.75	96.25	42.4	20.1	
6 COBB	1.00	219.25	20.25	7.75	25.00	1.50	98.50	43.3	20.6	
14 WILLIAMS	1.00	206.75	20.00	7.50	26.25	1.75	97.50	43.1	20.7	
12 RANSOM	1.00	202.25	20.50	6.25	25.00	3.00	96.50	44.5	20.3	
13 CARIBE	1.00	196.25	36.25	11.25	16.25	2.00	94.00	44.4	19.0	
8 JUPITER	1.00	176.50	36.50	16.25	20.00	4.00	95.00	42.8	19.0	
9 SJ-2	1.00	189.50	36.25	14.00	15.00	1.25	98.75	44.4	18.2	
3 GASOY 17	1.00	226.75	17.25	7.00	25.00	3.00	95.75	44.4	17.6	
16 UFV-1	1.00	60.00	51.00	6.50	23.75	2.25	98.50	45.7	18.6	
	GRAND MEAN	1.03	194.59	30.33	12.05	20.31	2.17	96.50		
	STANDARD ERROR OF A VARIETY MEAN	.07	10.65	2.88	1.69	.86	.19	4.49		
	COEFFICIENT OF VARIATION	14.00%	10.95%	18.98%	28.03%	8.51%	17.60%	9.31%		
	5% LSD VARIETY MEANS (*****NS)	.21	30.34	8.20	4.81	2.46	.54	*****		
	C O R R E L A T I O N S	(+ - PROB=.05	(+ - PROB=.01)							
	YIELD KG/HA	.03	.45++	-.10	.25+	-.07	-.12	-.02		
	DAYS TO FLOWER	.09	-.27+	.69++	.53++	-.74++	-.19	-.23		
	DAYS TO Maturity	-.07	-.40++	.69++	.47++	-.52++	.21	-.21		
	NUDULE ABUND 1	-.13	-.21	.36++	.17	-.30+	.00	-.00		
	NUDULE ABUND 2	.06	-.07	.15	.23	-.23	-.10	.01		
	NUDULE ACT. 1	.16	.14	-.22	-.19	-.00	-.38++	.01		
	NUDULE ACT. 2	-.12	-.00	-.24	-.21	.36++	.47++	-.03		
	PLANT HEIGHT	.16	.24	.32++	.71++	-.78++	-.18	-.07		
	LOGGING	.27+	.04	.26+	.46++	-.56++	-.13	.07		
	SHATTER	1.00	-.04	.01	.20	-.22	-.15	.07		
	PLANTS HARVEST	-.04	1.00	-.64++	.13	-.02	-.11	.03		
	PLANTS PER PLANT	.01	-.64++	1.00	.08	-.45++	-.06	-.08		
	POD HEIGHT	.20	.13	.08	1.00	-.59++	-.11	-.03		
	100 SEED WEIGHT	-.22	-.02	-.45++	-.59++	1.00	.34++	.14		
	QUALITY OF SEED	-.15	-.11	-.06	-.11	.34++	1.00	-.08		
	GERM.	.07	.03	-.08	-.03	.14	-.08	1.00		

TABLE 65 EXPERIMENT 152 YEAR 1978

REGION - AFRICA
 SITE - CHITALA
 LATITUDE - 13 DEG. 30 MIN. S
 COOPERATOR - P.K. SIBALE
 DATE PLANTED - NOVEMBER 24, 1978
 SOIL TYPE - SILT 10%, CLAY 26%, PH 6.2
 FERTILIZER USED (KG/HA) - N 25.0, P 25.0, K 25.0
 AMOUNT OF MOISTURE - 403 MM
 SUBSTITUTE VARIETY - HARTEE

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
9	DAVIS	3186.05	.00	112.00	3.25	3.25	.00	.00	92.50	59.75
15	BRAGG	2202.52	.00	112.00	3.75	2.75	.00	.00	90.00	56.25
13	CUTLER 71	2162.10	.00	90.00	3.00	3.00	.00	.00	98.75	54.13
16	CRAWFORD	2131.68	.00	90.00	3.50	3.25	.00	.00	97.50	58.38
6	HARDEE	2094.17	.00	112.00	3.50	2.75	.00	.00	96.25	88.50
11	CALLAND	2033.74	.00	90.00	3.00	3.25	.00	.00	98.75	57.63
5	RANSOM	2014.99	.00	112.00	3.75	3.25	.00	.00	98.75	50.50
7	JAMES	1921.22	.00	99.00	3.50	2.75	.00	.00	86.25	58.25
12	FRANKLIN	1789.94	.00	90.00	3.75	3.25	.00	.00	92.50	50.13
2	RILLITO	1781.61	.00	99.00	4.00	3.50	.00	.00	95.00	57.88
4	WILLIAMS	1733.68	.00	90.00	3.75	3.50	.00	.00	98.75	50.75
14	MITCHELL	1639.91	.00	90.00	3.25	3.25	.00	.00	100.00	54.75
10	GASOY 17	1519.05	.00	112.00	3.75	3.00	.00	.00	100.00	46.50
8	FORREST	1166.90	.00	112.00	4.00	4.00	.00	.00	87.50	55.75
3	BOSSIER	1052.29	.00	135.00	4.25	3.75	.00	.00	92.50	68.25
1	IMPROVED PELICAN	954.36	.00	135.00	4.25	4.00	.00	.00	96.25	101.50
										3.75
	GRAND MEAN	1836.51	.00	105.00	3.64	3.28	.00	.00	95.03	60.55
	STANDARD ERROR OF A VARIETY MEAN	230.66	.00	.00	.25	.33	.00	.00	2.92	2.08
	COEFFICIENT OF VARIATION	25.12%	.00%	.00%	13.86%	20.41%	.00%	.00%	6.13%	6.87%
	5% LSD VARIETY MEANS (*****NS)	657.03	.00	.00	.72	*****	.00	.00	8.30	5.92
										.93

CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)

YIELD KG/HA	1.00	*.00	-.32+	-.27+	-.08	*.00	-.04	-.19	-.07
DAYS TO FLOWER	.00	1.00	.00	.00	.00	.00	.00	.00	.00
DAYS TO MATURITY	-.32+	.00	1.00	.41++	.18	.00	-.15	.58++	.24
NODULE ABUND 1	-.27+	.00	.41++	1.00	.58++	.00	-.34++	.15	-.03
NODULE ABUND 2	-.08	.00	.18	.58++	1.00	.00	-.20+	.13	.12
NODULE ACT. 1	.00	.00	.00	.00	.00	1.00	.00	.00	.00
NODULE ACT. 2	-.04	.00	-.15	-.34++	-.30+	.00	1.00	.01	.24
PLANT HEIGHT	-.19	.00	.58++	.15	.13	.00	.01	1.00	.59++
LOGGING	-.07	.00	.24	-.03	.12	.00	.24	.00	1.00
SHATTER	.00	.00	.00	.00	.00	.00	.00	.00	.00
PLANTS HARVEST	.30+	.00	.07	-.01	-.04	.00	-.13	-.08	-.08
PONG PER PLANT	-.04	.00	.07	.09	.13	.00	.07	.31+	.13
FOD WEIGHT	.02	.00	-.25+	-.10	-.02	.00	.10	.34++	.51++
100 SEED WEIGHT	.50+	.00	-.31+	-.25+	-.19	.00	.07	-.16	-.11
QUALITY OF SEED	-.41++	.00	.46++	.27+	-.05	.00	.17	.14	.28+
PERCENT GERM.	.18	.00	.22	-.08	-.10	.00	.00	.04	.29+

TABLE 65 EXPERIMENT 452 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
9 DAVIS	.00	214.75	31.70	5.55	24.18	4.25	67.75	43.4	22.1	
15 BRAGG	.00	214.00	18.45	5.85	23.30	5.00	50.75	44.1	22.9	
13 CUTLER 71	.00	181.00	29.48	11.40	21.70	3.75	52.75	44.1	23.9	
16 CRAWFORD	.00	146.75	33.55	8.30	23.28	4.00	56.50	44.3	23.2	
16 HARDEE	.00	200.50	28.10	12.80	27.88	5.00	66.00	45.9	22.0	
6 CALLAND	.00	204.00	27.40	10.70	25.93	4.50	36.50	45.1	21.6	
11 RANSOM	.00	194.25	17.75	7.15	24.38	5.00	28.00	44.2	24.9	
5 JAMES	.00	204.75	37.90	8.73	24.30	5.00	37.50	45.1	24.3	
12 FRANKLIN	.00	185.75	24.40	10.60	23.05	4.00	42.00	41.4	22.7	
2 RILLITO	.00	133.50	54.80	8.65	20.50	5.00	32.75	44.8	24.6	
4 WILLIAMS	.00	197.50	23.18	8.70	24.88	4.50	37.50	43.6	22.5	
14 MITCHELL	.00	164.50	26.50	8.70	24.48	4.50	50.50	43.1	23.8	
10 GASOY 17	.00	202.25	26.35	5.00	23.10	5.00	48.50	43.8	22.0	
8 FORREST	.00	162.50	32.20	6.65	19.50	5.00	53.50	42.7	23.3	
3 BOSSIER	.00	177.75	27.20	7.75	23.08	5.00	53.25	45.7	22.1	
1 IMPROVED FELICAN	.00	170.25	44.88	9.70	16.95	4.75	54.75	44.4	21.9	
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
CORRELATIONS										
YIELD KG/HA										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE ABUND 1										
NODULE ABUND 2										
ACT. 1										
NODULE ACT. 2										
PLANT HEIGHT										
LOGGING										
SHATTER										
PLANTS HARVEST										
PODS PER PLANT										
POD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										

TABLE 66 EXPERIMENT 163 YEAR 1978

REGION - AFRICA
 SITE - LILONGWE
 LATITUDE - 13 DEG. 59 MIN. S
 COOPERATOR - P.K. SIBALE
 DATE PLANTED - DECEMBER 12, 1978 DATE HARVESTED - MARCH, 1979
 SOIL TYPE - SILT 14%, CLAY 42%, PH 6.0
 FERTILIZER USED (KG/HA) - N 25.0, P 25.0, K 25.0
 AMOUNT OF MOISTURE - 462 MM
 SUBSTITUTE VARIETY - HARDEE

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODEL ABUND 1	NODEL ABUND 2	NODEL ACT. 1	NODEL ACT. 2	PLANT HEIGHT	LONGIT
9	DAVIS	4709.27	44.00	111.00	4.00	2.50	100.00	97.50	68.50	1.00
8	FORREST	4584.25	36.00	111.00	3.25	3.75	98.75	93.75	61.25	1.00
3	BOSSIER	4250.85	44.00	115.00	3.75	2.00	100.00	98.75	81.00	2.00
15	BRAGG	3898.70	34.00	106.00	4.00	3.25	98.75	100.00	41.25	1.00
2	RILLITO	3807.01	34.00	97.00	3.75	2.00	100.00	95.00	55.50	2.50
6	HARDEE	3627.81	44.00	111.00	3.25	2.00	100.00	100.00	83.25	2.50
5	RANSOM	3611.14	31.00	106.00	3.50	2.75	100.00	98.75	40.00	1.00
10	GASOY 17	3609.05	31.00	97.00	3.75	3.50	100.00	96.25	35.50	1.00
14	MITCHELL	3473.61	31.00	97.00	3.75	3.25	100.00	93.75	45.00	1.25
16	CRAWFORD	3406.93	31.00	97.00	3.50	3.25	98.75	92.50	50.00	1.00
7	JAMES	3371.51	31.00	97.00	3.00	2.50	100.00	95.00	46.50	1.00
13	CUTLER 71	3177.72	31.00	97.00	3.25	3.00	97.50	98.75	44.25	1.00
1	IMPROVED PELICAN	2848.49	49.00	115.00	3.75	2.00	100.00	93.75	38.25	3.25
12	FRANKLIN	2765.14	31.00	89.00	3.25	4.00	97.50	95.00	41.00	1.00
11	CALLAND	2688.04	31.00	97.00	3.25	3.75	98.75	96.25	36.75	1.00
4	WILLIAMS	2583.85	31.00	89.00	3.25	3.00	98.75	85.00	34.38	1.00
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S (+ - PROB=.05 + - PROB=.01)										
YIELD KG/HA	1.00	.31+	.55++	.20	-.15	.12	*30+	*35++	-.03	
DAYS TO FLOWER	.31+	1.00	.84++	.23	-.53++	.20	*16	*21++	*.60++	
DAYS TO MATURITY	.55++	.84++	1.00	.24	-.43++	.22	*32+	*78++	*.41++	
NODULE ABUND 1	.20	.23	.24	1.00	-.03	.21	-.03	*.06	*.09	
NODULE ABUND 2	-.15	-.53++	-.43++	-.03	1.00	-.28+	-.10	-.55++	-.45++	
NODULE ACT. 1	.12	.20	.22	.21	-.28+	1.00	*.07	.15	.17	
NODULE ACT. 2	.30+	.16	.32+	-.03	-.10	.07	1.00	*.18	*.14	
PLANT HEIGHT	.35++	.91++	.78++	.06	-.55++	.15	*.18	1.00	*.57++	
LOGGING	-.03	.60++	.41++	.09	-.45++	.17	*.14	*.59++	1.00	
SHATTER	.00	.00	.00	.00	.00	.00	*.00	*.00	*.00	
PLANTS HARVEST	-.04	-.16	-.22	-.24	-.19	-.24	*.06	-.17	-.17	
PLANTS PER POD	.21	*.65++	.56++	.12	-.39++	.18	*.12	*.65++	*.55++	
POD HEIGHT	.01	*.57++	.40++	.01	-.26+	.04	*.04	*.57++	*.55++	
100 SEED WEIGHT	.06	-.27	-.15	.03	-.06	-.07	*.11	-.28+	-.28+	
QUALITY OF SEED	-.46++	-.55++	-.61++	-.08	*.41+	-.27	-.12	-.56++	-.27+	
PERCENT GERM.	-.10	-.04	-.23	-.24	-.02	-.10	-.20	-.10	-.10	

TABLE 66 EXPERIMENT 163 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	FODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
9	DAVIS	.00	288.75	25.88	8.85	23.53	2.75	91.00	44.2
8	FORREST	.00	266.75	23.75	8.95	19.90	3.00	90.25	42.0
3	BOSSIER	.00	231.50	28.80	10.00	22.35	2.75	91.00	44.4
15	BRAGG	.00	291.50	20.45	9.10	24.30	3.75	75.75	43.7
2	RILLITO	.00	245.50	26.88	8.55	22.43	4.00	93.00	42.8
6	HARDEE	.00	263.00	23.00	11.45	21.70	2.50	91.25	42.5
5	RANSOM	.00	257.75	20.50	6.10	22.68	3.75	80.00	42.2
10	GASOY 17	.00	287.50	22.30	8.50	21.08	3.50	77.75	41.5
14	MICHELL	.00	269.25	23.15	7.65	21.90	3.25	95.75	40.3
16	CRAWFORD	.00	270.00	23.78	8.55	22.18	3.00	91.75	43.1
7	JAMES	.00	297.50	20.05	9.10	23.43	3.00	95.50	43.6
13	CUTLER 71	.00	280.25	21.80	9.30	22.45	4.00	87.75	43.4
1	IMPROVED PELICAN	.00	277.25	35.10	13.15	19.00	3.00	82.75	45.3
12	FRANKLIN	.00	284.00	20.35	7.80	20.98	4.75	97.50	41.0
11	CALLAND	.00	275.50	20.20	9.40	23.88	4.25	85.00	43.5
4	WILLIAMS	.00	292.00	16.68	8.25	21.93	4.00	94.75	42.6
	GRAND MEAN	.00	273.63	23.29	9.04	22.10	3.45	88.81	
	STANDARD ERROR OF A VARIETY MEAN	.00	15.29	1.61	.66	.54	*2.2	4.13	
	COEFFICIENT OF VARIATION	.00%	11.17%	13.81%	14.51%	4.87%	12.46%	9.30%	
	5% LSD VARIETY MEANS (*****=NS)	.00	*****	4.58	1.87	1.53	.61	11.76	
	CORRELATIONS		(+ - PROB=.05	(+ - PROB=.01)					
	YIELD	KG/HA	.00	-.04	.21	.01	.06	-.46++	-.10
	DAYS TO FLOWER		.00	-.16	.65++	.57++	-.27+	-.55++	-.04
	DAYS TO MATURITY		.00	-.22	.56++	.40++	-.15	-.61++	-.23
	NUDULE ABUND 1		.00	-.24	.12	.01	.03	-.08	-.24
	NUDULE ABUND 2		.00	-.19	-.39++	-.26+	-.06	-.41++	-.02
	NUDULE ACT. 1		.00	-.24	.18	.04	-.07	-.27+	-.10
	NUDULE ACT. 2		.00	-.06	.12	.04	.11	-.12	-.20
	PLANT HEIGHT		.00	-.17	.65++	.57++	-.28+	-.56++	-.10
	LOGGING		.00	-.17	.55++	.55++	-.28+	-.27+	-.02
	SHATTER		1.00	-.00	.00	.00	.00	.00	.00
	PLANTS HARVEST		.00	1.00	-.31+	.02	.11	.09	.07
	PODS PER PLANT		.00	-.31+	1.00	.42++	-.38++	-.37++	-.09
	POD HEIGHT		.00	.02	.42++	1.00	-.17	-.20	-.10
	100 SEED WEIGHT		.00	.11	-.38++	-.17	1.00	.19	.09
	QUALITY OF SEED		.00	.09	-.37++	-.20	.19	1.00	.08
	PERCENT GERM.		.00	.07	-.09	-.10	.09	.08	1.00

TABLE 67 EXPERIMENT 212 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER HARVEST	PLANTS FODS PER PLANT	FOD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
9	HARCOR	1.00	165.00	51.25	5.28	17.25	.00	41.3	22.9
1	WILLIAMS	1.00	188.00	34.75	7.35	22.28	1.50	43.5	22.2
13	UNION	1.00	163.75	38.25	9.93	22.05	1.25	43.9	21.7
15	CALLAND	1.00	149.25	31.50	9.53	20.70	1.50	41.1	22.4
14	EVANS	1.00	116.50	45.50	8.23	16.85	2.25	41.3	22.9
14	CUTLER 71	1.00	160.50	40.75	11.30	20.58	1.50	43.1	21.7
14	CORSOY	1.00	171.00	50.50	6.58	15.70	1.75	41.4	21.6
3	FRANKLIN	1.25	153.75	36.25	12.58	17.63	2.25	40.8	22.0
8	STEELE	1.00	163.75	34.50	6.90	16.85	2.00	42.2	21.2
16	CRAWFORD	1.00	174.75	35.25	4.60	17.55	.00	43.9	21.8
10	HODGSON	1.00	159.25	36.00	9.05	17.00	2.00	41.0	23.6
11	ELF	1.00	159.25	33.00	9.00	18.43	1.75	42.4	22.7
5	MITCHELL	1.00	165.50	32.25	12.70	16.73	2.50	40.4	23.0
12	COLUMBUS	1.25	164.50	43.50	11.68	14.55	2.75	45.0	19.5
7	SWIFT	1.25	139.00	32.00	5.30	16.75	2.00	40.9	22.6
6	ALTONA	1.00	143.25	30.00	5.10	16.20	1.75	43.9	19.5
	GRAND MEAN	1.05	158.56	37.83	8.44	17.94	1.91	.00	
	STANDARD ERROR OF A VARIETY MEAN	.11	13.09	4.52	.94	1.20	.38	.00	
	COEFFICIENT OF VARIATION	21.14%	16.51%	23.90%	22.24%	13.32%	40.11%	.00%	
	5% LSD VARIETY MEANS (*****NS)	*****NS	*****NS	12.88	2.67	3.40	*****NS	.00	
	C O R R E L A T I O N S (+ = PROB=.05 ++ = PROB=.01)								
	YIELD KG/HA	-.04	-.02	.64++	-.06	*.63++	-.61++	.00	
	DAYS TO FLOWER	:00	:00	:00	:00	:00	:00	:00	
	DAYS TO MATURITY	:16	-.00	:24	:48++	:30+	-.07	:00	
	NODULE ABUND 1	:00	:00	:00	:00	:00	:00	:00	
	NODULE ABUND 2	-.04	.08	-.41++	-.07	-.35++	.16	:00	
	NODULE ACT. 1	:00	:00	:00	:00	:00	:00	:00	
	NODULE ACT. 2	:02	:02	:05	:57++	:36++	-.06	:00	
	PLANT HEIGHT	:14	-.10	:33++	:32++	:34++	-.21	:00	
	LODGING	:08	-.22	:26+	:14	:09	-.04	:00	
	SHATTER HARVEST	1.00	.02	:08	:02	-.05	:12	:00	
	PLANTS FOD	:02	1.00	-.26+	:04	:07	:06	:00	
	PLANT HEIGHT	:08	-.26+	1.00	-.18	:17	-.23	:00	
	FOD WEIGHT	:02	:04	-.18	1.00	-.00	:24	:00	
	100 SEED QUALITY	-.05	:07	:17	-.00	:1.00	-.59++	:00	
	100 SEED PERCENT	:12	:06	-.23	:24	-.59++	1.00	:00	
	GERM.	:00	:00	:00	:00	:00	:00	1.00	

TABLE 68

EXPERIMENT 211

YEAR 1978

REGION - AFRICA
 SITE - GHARB
 LATITUDE - 34 DEG. 30 MIN. N
 COOPERATOR - M.A. YACOUBI
 DATE PLANTED - MAY 22, 1978
 SOIL TYPE - SAND 17%, SILT 55%, CLAY 22%, PH 8.2
 FERTILIZER USED (KG/HA) - N 25.0, P 25.0, K 25.0
 AMOUNT OF MOISTURE - 707 MM
 NUMBER OF IRRIGATIONS - 9 (600 MM)

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LONGING	
1.1	ELF	3046.44	51.00	126.25	.00	3.50	.00	85.00	60.10	.00	
4	CUTLER 71	2750.55	49.50	113.00	.00	3.00	.00	93.75	50.25	.00	
5	MITCHELL	2729.71	49.50	116.50	.00	3.50	.00	75.00	61.68	.00	
9	HARCOR	2613.02	42.00	87.50	.00	4.00	.00	56.25	79.33	.00	
15	EVANS	2592.13	50.25	115.75	.00	3.50	.00	80.00	72.35	.00	
14	CORSOY	2535.92	39.00	87.00	.00	3.75	.00	66.25	68.15	.00	
12	COLUMBUS	2521.34	51.00	127.00	.00	3.75	.00	70.00	73.83	.00	
3	FRANKLIN	2342.13	51.00	129.00	.00	3.50	.00	68.75	76.93	.00	
16	CRAWFORD	2158.76	34.00	78.25	.00	3.50	.00	77.50	66.23	.00	
10	HODGSON	2083.75	42.00	87.00	.00	4.00	.00	65.00	66.37	.00	
2	GALLAND	2063.75	51.00	115.00	.00	3.75	.00	75.00	62.85	.00	
13	UNION	2075.41	51.00	115.00	.00	3.50	.00	58.75	79.78	.00	
1	WILLIAMS	1967.06	47.25	108.00	.00	3.50	.00	70.00	71.95	.00	
8	STEELE	1954.56	39.00	87.00	.00	3.75	.00	61.25	72.50	.00	
7	SWIFT	1369.02	39.00	87.00	.00	4.25	.00	36.25	67.30	.00	
6	ALTONA	839.75	39.00	87.00	.00	4.25	.00	47.50	50.93	.00	
STANDARD ERROR OF A VARIETY MEAN											
2228.96											
224.22											
1.41											
1.82											
20.12%											
6.23%											
3.50%											
638.67											
4.03											
5.19											

TABLE 68 EXPERIMENT 211 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED OF SEED	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
11	ELF	.00	235.00	22.45	.00	.00	.00	.00	41.8	23.7
4	CUTLER 71	.00	264.25	14.10	.00	.00	.00	.00	41.9	22.7
5	MICHELL	.00	216.00	19.70	.00	.00	.00	.00	40.0	22.9
9	HANCOR	.00	260.25	29.70	.00	.00	.00	.00	46.7	21.7
15	EVANS	.00	175.50	23.55	.00	.00	.00	.00	41.6	20.9
14	CORSOY	.00	264.00	24.05	.00	.00	.00	.00	41.3	21.4
12	COLUMBUS	.00	230.00	13.35	.00	.00	.00	.00	43.9	21.6
3	FRANKLIN	.00	231.75	15.95	.00	.00	.00	.00	40.8	23.2
16	CRAWFORD	.00	322.50	24.88	.00	.00	.00	.00	44.4	20.9
10	HODGSON	.00	267.75	21.95	.00	.00	.00	.00	41.8	22.2
2	CALLAND	.00	245.75	18.58	.00	.00	.00	.00	41.1	22.0
13	UNION	.00	243.75	13.28	.00	.00	.00	.00	42.6	21.9
1	WILLIAMS	.00	231.25	13.50	.00	.00	.00	.00	42.5	22.3
8	STEELE	.00	235.50	21.80	.00	.00	.00	.00	42.3	21.5
7	SWIFT	.00	255.25	23.18	.00	.00	.00	.00	41.1	21.7
6	ALTONA	.00	271.25	22.25	.00	.00	.00	.00	43.1	17.1
	GRAND MEAN	.00	246.86	20.17	.00	.00	.00	.00	.00	.00
	STANDARD ERROR OF A VARIETY MEAN	.00	16.01	3.06	.00	.00	.00	.00	.00	.00
	COEFFICIENT OF VARIATION	.00%	12.97%	30.32%	.00%	.00%	.00%	.00%	.00%	.00%
	5% LSD VARIETY MEANS (*****NS)	.00	45.61	8.71	.00	.00	.00	.00	.00	.00
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)										
	YIELD KG/HA	.00	-.10	.07	.00	.00	.00	.00	.00	.00
	DAYS TO FLOWER	.00	-.48++	-.36++	.00	.00	.00	.00	.00	.00
	DAYS TO MATURITY	.00	-.50++	-.43++	.00	.00	.00	.00	.00	.00
	NODULE ABUND 1	.00	-.06	.34++	.00	.00	.00	.00	.00	.00
	NODULE ABUND 2	.00	-.02	-.25+	.00	.00	.00	.00	.00	.00
	NODULE ACT. 1	.00	-.02	-.32++	-.06	.00	.00	.00	.00	.00
	NODULE ACT. 2	.00	-.02	-.32++	-.06	.00	.00	.00	.00	.00
	PLANT HEIGHT	.00	-.00	-.00	-.00	.00	.00	.00	.00	.00
	LODGING	.00	-.00	-.00	-.00	.00	.00	.00	.00	.00
	SHATTER	1.00	-.00	-.00	-.00	.00	.00	.00	.00	.00
	PLANTS HARVEST	.00	1.00	.03	.00	.00	.00	.00	.00	.00
	PODS PER PLANT	.00	.03	1.00	.00	.00	.00	.00	.00	.00
	100 SEED HEIGHT	.00	.00	.00	.00	1.00	.00	.00	.00	.00
	QUALITY OF SEED	.00	.00	.00	.00	.00	1.00	.00	.00	.00
	PERCENT GERM.	.00	.00	.00	.00	.00	.00	1.00	.00	.00

TABLE 69 EXPERIMENT 216 YEAR 1978

REGION - AFRICA
 SITE - TAILA
 LATITUDE - 32 DEG. N
 COOPERATOR - NAIDAH DRISS
 DATE PLANTED - JUNE 12, 1978
 SOIL TYPE - SAND 30%, SILT 20%, CLAY 50%, PH 7.9
 FERTILIZER USED (KG/HA) - N 25.0, P 26.4, K 49.8
 AMOUNT OF MOISTURE - 446 M
 NUMBER OF IRRIGATIONS - 11 (445 MM)

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
16	CRAWFORD	3370.25	37.00	107.25	.00	.00	.00	.00	85.15	.00
3	FRANKLIN	3365.25	37.00	107.25	.00	.00	.00	.00	80.98	.00
11	ELF	3074.75	37.00	110.00	.00	.00	.00	.00	39.70	.00
2	CALLAND	2979.50	37.00	107.25	.00	.00	.00	.00	69.63	.00
13	UNION	2938.00	37.00	108.00	.00	.00	.00	.00	75.38	.00
12	COLUMBUS	2796.75	37.00	111.25	.00	.00	.00	.00	86.80	.00
4	CUTLER 71	2780.25	37.00	108.75	.00	.00	.00	.00	68.72	.00
15	EVANS	2618.50	32.00	92.00	.00	.00	.00	.00	52.85	.00
1	WILLIAMS	2513.50	37.00	99.00	.00	.00	.00	.00	46.80	.00
14	CORSOY	2477.00	35.00	92.00	.00	.00	.00	.00	50.68	.00
9	HARCOR	2397.50	37.00	92.00	.00	.00	.00	.00	51.90	.00
10	HODGSON	2363.25	32.00	92.00	.00	.00	.00	.00	53.33	.00
5	MITCHELL	2355.25	37.00	110.00	.00	.00	.00	.00	65.98	.00
8	STEELE	2095.00	35.00	92.00	.00	.00	.00	.00	46.83	.00
6	ALTONA	1983.25	32.00	79.75	.00	.00	.00	.00	51.28	.00
7	SWIFT	1680.25	32.00	92.00	.00	.00	.00	.00	44.30	.00
GRAND MEAN										
VARIETY MEAN										
184.52										
14.15% COEFFICIENT OF VARIATION										
525.59 5% LSD VARIETY MEANS (*****NS)										
C O R R E L A T I O N S (+ - PROB=.05 ++ - PROB=.01)										
YIELD KG/HA										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE ABUND 1										
NODULE ABUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
PLANT HEIGHT										
LODGING										
SHATTER										
PLANTS HARVEST										
PODS PER PLANT										
POD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										

TABLE 69 EXPERIMENT 216 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
16	CRAWFORD	*.00	141.25	30.50	*.00	15.20	*.00	97.50	42.6	21.5
3	FRANKLIN	*.00	218.00	22.50	*.00	16.38	*.00	97.00	40.1	23.3
11	ELF	*.00	169.25	26.75	*.00	18.08	*.00	95.00	43.5	22.8
2	CALLAND	*.00	212.50	23.75	*.00	14.48	*.00	87.00	42.7	22.0
13	UNION	*.00	184.75	26.00	*.00	16.05	*.00	98.50	43.2	22.3
12	COLUMBUS	*.00	216.25	23.50	*.00	14.18	*.00	94.00	42.7	21.1
4	CUTLER 71	*.00	207.75	23.25	*.00	16.18	*.00	98.50	41.7	23.8
15	EVANS	*.00	185.75	32.00	*.00	11.85	*.00	49.50	40.9	22.3
1	WILLIAMS	*.00	199.00	21.25	*.00	14.18	*.00	90.00	43.2	21.3
14	CORSOY	*.00	185.25	32.25	*.00	13.83	*.00	74.00	41.6	23.7
9	HARCOR	*.00	155.75	32.25	*.00	13.00	*.00	65.00	43.1	19.9
10	HODGSON	*.00	193.75	26.25	*.00	13.15	*.00	92.00	42.8	22.0
5	MITCHELL	*.00	194.00	29.75	*.00	14.23	*.00	91.00	40.4	23.7
8	STEELE	*.00	171.50	28.00	*.00	13.50	*.00	95.00	43.6	20.7
6	ALTONA	*.00	200.00	20.75	*.00	11.80	*.00	41.00	42.5	17.6
7	SWIFT	*.00	213.50	18.75	*.00	11.35	*.00	74.00	41.2	22.6
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
CORRELATIONS (+ - PROB=.05) (+ - PROB=.01)										
YIELD KG/HA										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE ABUND 1										
NODULE ABUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
PLANT HEIGHT										
LOGGING										
SHATTER										
PLANTS HARVEST										
PODS PER PLANT										
POD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										

TABLE 70 EXPERIMENT 161 YEAR 1973

REGION - AFRICA
 SITE - KARAMA
 LATITUDE - 2 DEG. 16 MIN. S
 COOPERATOR - NDAMAGE GEORGES
 DATE PLANTED - FEBRUARY 22, 1979
 SOIL TYPE - LAKE COLLUVIUMS, FH 6-7
 AMOUNT OF MASTURE - 594 MM
 LOCAL VARIETY - PALMETTO

COUNTRY = RWANDA
 ELEVATION = 1350 M
 LONGITUDE = 30 DEG. 17 MIN. E
 DATE REQUESTED = JUNE 1979

TABLE 70 EXPERIMENT 161 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	PODS PER PLANT	HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
9 DAVIS	.00	270.75	23.25	4.33	20.35	.00	.00	41.7	19.8
8 FORREST	.00	239.00	24.75	4.63	18.28	.00	.00	40.7	19.2
3 BOSSIER	.00	219.25	20.50	4.65	18.03	.00	.00	42.8	19.1
15 BRAGG	.00	298.75	15.00	4.33	20.30	.00	.00	43.1	19.4
7 JAMES	.00	306.50	19.75	4.13	19.10	.00	.00	42.2	20.9
11 CALLAND	.00	295.00	13.00	4.35	19.60	.00	.00	42.4	18.5
16 CRAWFORD	.00	224.25	19.50	4.25	18.53	.00	.00	42.1	20.1
5 RANSOM	.00	271.50	16.00	3.93	18.95	.00	.00	41.2	23.5
13 CUTLER 71	.00	291.25	14.50	4.13	18.08	.00	.00	39.9	21.5
1 IMPROVED PELICAN	.00	291.25	21.75	3.78	15.83	.00	.00	45.0	18.5
14 MITCHELL	.00	239.50	14.50	4.28	19.55	.00	.00	36.4	21.9
2 RILLITO	.00	199.00	22.50	4.23	16.88	.00	.00	40.0	21.3
6 PALMETTO	.00	197.50	29.75	4.05	14.70	.00	.00	42.0	17.9
4 WILLIAMS	.00	271.00	11.75	4.03	19.10	.00	.00	41.5	21.5
12 FRANKLIN	.00	285.50	13.00	4.03	17.28	.00	.00	38.9	19.5
10 GASOY 17	.00	215.25	15.50	4.15	21.08	.00	.00	42.7	18.4
GRAND MEAN	.00	257.20	18.44	4.20	18.47	.00	.00		
STANDARD ERROR OF A VARIETY MEAN	.00%	13.71	2.39	.12	.58	.00	.00		
COEFFICIENT OF VARIATION	.00%	10.66%	25.96%	5.71%	6.25%	.00%	.00%		
5% LSD VARIETY MEANS (*****NS)	.00	39.06	6.82	.34	1.64	.00	.00		

C O R R E L A T I O N S	(+ - PROB=.05	(+ - PROB=.01)
YIELD KG/HA	.00	.12
DAYS TO FLOWER	.00	-.15
DAYS TO MATURITY	.00	-.17
NODULE ABUND 1	.00	.00
NODULE ABUND 2	.00	.00
NODULE ACT. 1	.00	.33++
NODULE ACT. 2	.00	.04
FLANT HEIGHT	.00	-.10
LOGGING	.00	.00
SHATTER	1.00	.00
PLANTS HARVEST	.00	1.00
PODS PER PLANT	.00	-.47++
POD HEIGHT	.00	-.27+
100 SEED WEIGHT	.00	.10
QUALITY OF SEED	.00	.00
PERCENT GERM.	.00	.00

TABLE 71 EXPERIMENT 172 YEAR 1978

REGION - AFRICA
 SITE - RUBONA
 LATITUDE - 2 DEG. 29 MIN. S
 COOPERATOR - PIERRE NYABYENDA
 DATE PLANTED - MARCH 16, 1979
 AMOUNT OF MOISTURE - 483 MM
 LOCAL VARIETY - PALMETTO

COUNTRY - RWANDA
 ELEVATION - 1650 M
 LONGITUDE - 29 DEG. 46 MIN. E
 DATE HARVESTED - JULY, 1979

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	YEARS TO FLOWER	YEARS TO MATURITY	NUDLE ABUND 1	NUDLE ABUND 2	NUDLE ACT. 1	NUDLE ACT. 2	PLANT HEIGHT	LOGGING
3	BOSSIER	2291.00	38.00	875.75	.00	.00	.00	.00	50.53	1.50
9	DAVIS	2209.00	41.00	1120.00	.00	.00	.00	.00	40.53	1.00
4	WILLIAMS	2072.50	34.00	783.25	.00	.00	.00	.00	33.20	1.00
6	PALMETTO	1987.00	41.00	844.75	.00	.00	.00	.00	59.70	1.75
14	MITCHELL	1972.00	34.00	782.75	.00	.00	.00	.00	39.28	1.00
2	RILLITO	1933.00	34.00	1080.00	.00	.00	.00	.00	43.65	1.00
5	RANSOM	1688.00	34.00	1040.00	.00	.00	.00	.00	26.50	1.00
8	FORREST	1587.00	38.75	862.75	*00	*00	*00	*00	41.05	1.00
11	CALLAND	1547.00	34.75	860.00	*00	*00	*00	*00	41.10	1.00
13	CUTLER 71	1527.50	34.00	860.25	*00	*00	*00	*00	43.10	1.00
7	JAMES	1525.00	34.00	801.50	*00	*00	*00	*00	46.48	1.00
16	CRAWFORD	1473.00	34.00	824.00	*00	*00	*00	*00	39.20	1.00
12	FRANKLIN	1041.50	34.25	821.50	*00	*00	*00	*00	35.55	1.00
15	BRAGG	952.00	35.50	1020.00	*00	*00	*00	*00	35.83	1.00
1	IMPROVED FELICAN	856.50	52.00	1197.50	*00	*00	*00	*00	67.33	2.00
10	GASOY 17	765.50	34.25	782.75	*00	*00	*00	*00	26.98	1.00
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****NS)										
GRAND MEAN										
	1589.22	36.72	909.80	*00	*00	*00	*00	*00	41.87	1.14
	165.96	*24	113.88	*00	*00	*00	*00	*00	2.20	.09
	20.89%	1.31%	25.03%	*00%	*00%	*00%	*00%	*00%	10.52%	16.42%
	472.74	.69	*****	.00	.00	.00	.00	.00	.28	.27

C O R R E L A T I O N S (+ - PROB=.05 + + - PROB=.01)

YIELD KG/HA	1.00	-.11	-.01	.00	.00	.00	.00	.00	*10	.00
YEARS TO FLOWER	-.11	1.00	*19	*00	*00	*00	*00	*00	*70++	*74++
YEARS TO MATURITY	-.01	*19	1.00	*00	*00	*00	*00	*00	*16	.02
NUDLE ABUND 1	*00	*00	*00	1.00	*00	*00	*00	*00	*00	*00
NUDLE ABUND 2	*00	*00	*00	*00	1.00	*00	*00	*00	*00	*00
NUDLE ACT. 1	*00	*00	*00	*00	*00	1.00	*00	*00	*00	*00
NUDLE ACT. 2	*00	*00	*00	*00	*00	*00	1.00	*00	*00	*00
PLANT HEIGHT	*10	*70++	*16	*00	*00	*00	*00	*00	*00	*00
LOGGING	*00	*74++	*02	*00	*00	*00	*00	*00	*70++	*70++
SHATTER	*00	*00	*00	*00	*00	*00	*00	*00	*00	*00
PLANTS HARVEST	-.04	-.13	-.08	*00	*00	*00	*00	*00	*06	-.03
PLANTS PER POD	*40++	*40++	-.15	*00	*00	*00	*00	*00	*42++	*42++
POD HEIGHT	*00	*00	*00	*00	*00	*00	*00	*00	*00	*00
100 SEED WEIGHT	-.42++	-.13	-.06	*00	*00	*00	*00	*00	-.38++	-.23
QUALITY OF SEED	-.21	-.11	-.02	*00	*00	*00	*00	*00	*11	.00
PERCENT GERM.	.00	.00	.00	*00	*00	*00	*00	*00	.00	.00

TABLE 71 EXPERIMENT 172 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
3 BOSSIER	1.00	152.75	35.10	.00	19.38	2.00	.00	
9 DAVIS	1.00	153.25	23.13	.00	17.38	1.25	.00	
4 WILLIAMS	1.00	221.25	13.05	.00	20.13	2.25	.00	
6 PALMETTO	1.00	167.00	25.25	.00	11.38	2.25	.00	
14 MITCHELL	1.00	171.00	22.68	.00	15.38	2.00	.00	
2 RILLITO	1.00	151.75	17.08	.00	16.00	2.00	.00	
5 RANSOM	1.00	193.25	13.50	.00	19.50	3.00	.00	
8 FORREST	1.00	160.25	15.70	.00	20.75	2.00	.00	
11 CALLAND	1.00	198.50	19.00	.00	20.25	4.25	.00	
13 CUTLER 71	1.00	228.25	18.65	.00	20.38	4.00	.00	
7 JAMES	1.00	235.00	13.55	.00	20.00	3.50	.00	
16 CRAWFORD	1.00	123.50	20.85	.00	20.13	2.00	.00	
12 FRANKLIN	1.00	225.00	13.10	.00	15.88	4.25	.00	
15 BRAGG	1.00	174.50	9.60	.00	22.50	1.75	.00	
1 IMPROVED FELICAN	1.00	188.00	25.15	.00	19.88	3.00	.00	
10 GASOY 17	1.00	162.50	9.70	.00	24.75	1.25	.00	
GRAND MEAN	1.00	181.61	18.44	.00	18.98	2.55	.00	
STANDARD ERROR OF A VARIETY MEAN	.00	15.48	2.60	.00	.41	.18	.00	
COEFFICIENT OF VARIATION	.002	17.04%	28.21%	.00%	4.36%	14.28%	.00%	
5% LSD VARIETY MEANS (*****=NS)	.00	44.08	7.41	.00	1.18	.52	.00	
C O R R E L A T I O N S	(+ - PROB=.05	(+ - PROB=.01)						
YIELD	KG/HA	.00	-.04	.40++	.00	-.42++	-.21	.00
DAYS TO FLOWER	.00	-.13	.40++	.00	-.13	-.11	.00	
DAYS TO MATURITY	.00	-.08	-.15	.00	-.06	-.02	.00	
NODULE ABUND 1	.00	.00	.00	.00	.00	.00	.00	
NODULE ABUND 2	.00	.00	.00	.00	.00	.00	.00	
NODULE ACT. 1	.00	.00	.00	.00	.00	.00	.00	
NODULE ACT. 2	.00	.00	.00	.00	.00	.00	.00	
PLANT HEIGHT	.00	.06	.42++	.00	-.38++	.11	.00	
LOGGING	.00	-.03	.42++	.00	-.23	.00	.00	
SHATTER	1.00	.00	.00	.00	.00	.00	.00	
PLANTS HARVEST	.00	1.00	-.30+	.00	.05	.55++	.00	
PODS PER PLANT	.00	-.30+	1.00	.00	-.30+	-.09	.00	
POD HEIGHT	.00	.00	.00	1.00	.00	.00	.00	
100 SEED WEIGHT	.00	.05	-.30+	.00	1.00	-.08	.00	
QUALITY OF SEED	.00	.55++	-.09	.00	-.08	1.00	.00	
GERM. PERCENT	.00	.00	.00	.00	.00	.00	1.00	

TABLE 72 EXPERIMENT 62 YEAR 1978

REGION - AFRICA
 SITE - CENTRE TAO/QMOS DE GUEDE
 LATITUDE - 16 DEG. 30 MIN. N
 COOPERATOR - DR. ING T. MOSCAL
 DATE PLANTED - AUGUST 30 1978
 FERTILIZER USED (KG/H.A) N 30,
 AMOUNT OF MOISTURE - 726 MM
 NUMBER OF IRRIGATIONS - 14 (7000

COUNTRY - SENEGAL
 ELEVATION - 10 M
 LONGITUDE - 15 DEG. 10 MIN. W
 DATE HARVESTED - NOVEMBER 1978
 22, K 42.8

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAY TO FLOWER	DAY TO MATURITY	NUDLE ABUND 1	NUDLE ACT. 1	NUDLE ACT. 2	PLANT HEIGHT	LODGING
13 BOSSIER	2044.99	31.00	72.00	153.00	212.75	52.00	44.50	42.75	1.00
12 UFV 1	1821.61	43.00	91.50	163.00	183.25	36.50	46.00	46.25	1.25
12 RILLITO	1800.36	43.00	84.00	235.75	351.00	41.75	27.50	49.25	1.50
16 COBB	1652.83	33.00	89.00	137.25	177.00	48.00	41.75	26.50	1.00
9 JUPITER	1580.73	46.00	108.00	214.00	244.25	46.75	46.75	58.25	1.25
14 WILLIAMS	1488.63	34.00	105.00	213.00	259.25	45.00	49.75	31.00	1.00
15 RANSOM	1457.37	34.00	90.00	194.00	219.25	43.00	44.75	34.75	1.00
7 TUNIA	1346.10	43.00	94.00	143.50	160.00	59.25	61.00	60.00	1.25
11 GASOY 17	1335.27	46.00	82.00	196.50	223.50	51.75	50.75	54.00	1.25
10 IMPROVED PELICAN	1200.24	42.00	107.00	131.50	150.50	48.00	44.50	69.00	1.75
3 SJ 2	899.35	47.00	94.00	144.25	153.75	43.00	55.00	55.25	1.50
5 ORBA	872.67	44.00	100.00	104.50	130.75	42.25	42.00	64.25	2.25
6 IAC 2	772.65	45.00	103.00	244.75	300.75	34.75	33.50	71.75	2.25
4 HARDEE L.S.	493.85	43.00	106.00	478.25	498.75	24.00	32.25	46.75	1.25
1 CH 3	256.30	44.00	110.00	252.00	297.00	32.00	41.00	61.00	1.50
8 CARIBE	83.35	45.00	120.00	142.25	195.00	40.50	42.00	77.25	2.50
GRAND MEAN									
1194.15	41.44	97.22	196.72	234.80	43.03	43.94	53.00	1.47	
160.10	.00	.38	55.71	55.04	7.97	5.93	4.27	.26	
26.81%	.00%	.77%	56.64%	46.88%	37.04%	27.01%	16.10%	34.88%	
456.04	.00	1.07	158.69	156.77	*****	16.90	12.15	.73	
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)									
YIELD KG/HA	-1.00	-47++	-67++	-14	-0.09	.16	-0.01	-46++	-41++
DAY TO FLOWER	-47++	1.00	43++	.08	.05	-1.3	-0.00	.66++	.42++
DAY TO MATURITY	-67++	43++	1.00	.13	.09	-2.1	-0.05	.46++	.41++
NUDLE ABUND 1	-1.14	.08	.13	1.00	.96++	-56++	-47++	.04	-.07
NUDLE ABUND 2	-0.09	.05	.09	.96++	1.00	-49++	-56++	.03	-.05
NUDLE ACT. 1	.16	-.13	-.21	-.56++	-.49++	1.00	.74++	-.03	-.08
NUDLE ACT. 2	-.01	-.00	-.05	-.47++	-.56++	.74++	1.00	-.02	-.08
PLANT HEIGHT	-.46++	.66++	.46++	.04	.03	-0.5	-0.02	1.00	.66++
LODGING	-.41++	.42++	.41++	-.07	-.05	-.08	-.08	.66++	1.00
SHATTER	.04	.06	-.03	.00	-.05	.15	.12	.19	.14
PLANTS HARVEST	.42++	-.33++	-.33++	-.01	-.06	.02	-.07	-.06	.06
PODS PER PLANT	-.39++	.26+	.22	.22	.17	.13	.20	.30+	-.12
HEIGHT	-.30+	.35++	.20	.18	.22	-.27+	-.31+	.37++	.38++
100 SEED WEIGHT	.48++	-.22	-.39++	-.11	-.16	.09	.20	-.37++	-.43++
QUALITY OF SEED	-.64++	.54++	.55++	.11	.07	-.14	.07	.07	.23
PERCENT GERM.	.27+	.29+	-.24	.10	.09	-.00	-.04	-.04	-.13

TABLE 72 EXPERIMENT 62 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
13 BOSSIER	1.00	138.75	33.25	6.25	12.95	1.00	66.50	
2 UFV 1	1.50	161.50	59.50	6.50	13.75	3.00	85.00	
12 RILLITO	2.00	171.50	51.50	6.75	12.28	2.00	85.00	
16 COBB	1.75	143.00	46.75	5.00	13.63	1.25	56.50	
9 JUPITER	1.75	72.25	54.75	6.50	12.78	2.75	87.25	
14 WILLIAMS	1.50	124.75	39.25	5.50	13.55	1.75	22.00	
15 RANSOM	2.50	107.25	68.25	5.75	12.10	2.00	68.50	
7 TUNIA	1.75	73.00	100.25	5.25	13.00	3.00	81.50	
11 GASOY 17	2.00	51.25	61.00	6.25	13.93	1.75	52.00	
10 IMPROVED FELICAN	2.00	110.75	63.25	6.25	11.85	2.50	83.50	
3 SJ 2	1.50	92.50	65.00	7.50	12.50	3.50	79.50	
5 ORBA	2.50	101.25	65.50	6.75	11.35	2.00	60.50	
6 IAC 2	1.75	130.25	59.50	9.25	12.23	3.25	68.00	
4 HARDEE L.S.	1.25	66.50	72.25	8.00	12.00	3.25	77.50	
1 CH 3	1.75	70.75	107.00	7.75	12.50	4.75	66.00	
8 CARIBE	1.25	59.00	70.00	6.50	11.43	4.00	29.00	
GRAND MEAN	1.73	104.64	63.56	6.61	12.61	2.63	66.77	
STANDARD ERROR OF A VARIETY MEAN	.35	20.79	14.93	.71	.36	.42	2.58	
COEFFICIENT OF VARIATION	40.04%	39.74%	46.98%	21.50%	5.77%	31.81%	7.74%	
5% LSD VARIETY MEANS (*****=NS)	*****	59.22	*****	2.02	1.04	1.19	7.36	
CORRELATIONS (+ - PROB=.05) ++ - FROB=.01)								
YIELD KG/HA	.04	.42++	-.39++	-.30+	.48++	-.64++	.274	
DAYS TO FLOWER	.06	-.33++	.26+	.35++	-.22	.54++	.29+	
DAYS TO MATURITY	-.03	-.33++	.22	.20	-.39++	.55++	.24	
NUDULE ABUND 1	.00	-.01	.22	.18	-.11	.11	.10	
NUDULE ABUND 2	-.05	.06	.17	.22	-.16	.07	.09	
NUDULE ACT. 1	.15	.02	.13	-.27+	.09	-.14	-.00	
NUDULE ACT. 2	.12	-.07	.20	-.31+	.20	.07	-.04	
PLANT HEIGHT	.19	-.06	.30+	.37++	-.37++	.45++	.10	
LONGING	.14	.06	-.12	.38++	-.43++	.23	-.13	
SHATTER	1.00	.26+	.17	.14	.04	-.01	.02	
PLANTS HARVEST	.26+	1.00	-.20	.13	.15	-.27+	.10	
PLANTS PLANT	.17	-.20	1.00	-.11	-.19	.40++	.13	
FOD HEIGHT	.14	.13	-.11	1.00	-.20	.23	.07	
100 SEED WEIGHT	.04	.15	-.19	-.20	1.00	-.27+	-.06	
100 SEED QUALITY	-.01	-.27+	.40++	.23	-.27+	1.00	.08	
GERM. PERCENT	.02	.10	.13	.07	-.06	.08	1.00	

TABLE 73 EXPERIMENT 42 YEAR 1978

REGION - AFRICA
 SITE - AFGOI
 LATITUDE - 2 DEG. 9 MIN. N
 COOPERATOR - G.O. SALAD
 DATE PLANTED - OCTOBER 18, 1978
 SOIL TYPE - SAND 14.0%, SILT 16.0%, CLAY 70.0%, PH 7.6
 FERTILIZER USED (KG/HA) - N 25.0, P 25.0, K 25.0
 AMOUNT OF MOISTURE - 288 MM

COUNTRY - SOMALIA
 ELEVATION - 50 M
 LONGITUDE - 45 DEG. 7 MIN. E
 DATE HARVESTED - JANUARY, 1979

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
					ABUND 1	ABUND 2	ACT. 1	ACT. 2		
9	JUPITER	1831.62	43.00	119.50	2.00	.00	85.00	.00	40.75	1.25
8	CARIBBE	1752.43	38.00	136.50	2.00	.00	75.00	.00	64.50	1.00
12	BOSSIER	1416.95	38.00	105.00	2.00	.00	77.50	.00	33.25	1.00
12	UFU-1	1321.10	38.00	115.00	2.00	.00	80.00	.00	24.50	1.00
13	WILLIAMS	1256.50	33.00	88.00	2.00	.00	67.50	.00	27.00	1.25
4	HARDEE LS	1060.63	35.50	124.75	2.00	.00	65.00	.00	33.00	1.00
15	COBB	939.77	33.00	92.50	2.00	.00	82.50	.00	23.50	1.00
10	IMPROVED FELICAN	841.83	35.50	100.75	2.00	.00	90.00	.00	43.50	1.00
14	RANSOM	816.83	33.00	104.00	2.00	.00	77.50	.00	25.50	1.00
1	CH-3	648.05	38.00	134.50	3.00	.00	72.50	.00	41.00	1.00
16	GASOY 17	616.79	33.00	91.00	2.00	.00	82.50	.00	19.50	1.00
3	SJ-2	545.94	38.00	117.75	2.50	.00	95.00	.00	32.25	1.25
5	ORBA	523.02	38.00	91.00	2.00	.00	87.50	.00	35.25	1.00
6	IAC-2	512.60	38.00	113.50	2.50	.00	87.50	.00	40.50	1.75
7	TUNIA	485.51	33.00	119.50	2.00	.00	80.00	.00	30.50	1.00
11	RILLITO	404.25	33.00	92.50	2.00	.00	67.50	.00	25.25	2.00
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										

C O R R E L A T I O N S (+ = PROB=.05 ++ = PROB=.01)

YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
1.00	*.39++	*.25+	-.12	.00	-.14	.00	*.16	*.03	*.00	*.00	*.00	*.00	*.00	*.00	*.00
	*.39++	*.45++	*.15	.00	*.00	*.00	*.00	*.13	*.00	*.00	*.00	*.00	*.00	*.00	*.00
	*.25+	*.45++	1.00	.21	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00
	-.12	*.15	*.21	.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00
				1.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00
					*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00
					*.03	-.13	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00
					*.16	*.03	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00
					*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00
					*.00	*.00	*.00	*.02	*.00	*.00	*.00	*.00	*.00	*.00	*.00
					*.02	-.02	*.23	*.07	*.00	*.00	*.00	*.00	*.00	*.00	*.00
					*.28+	*.02	*.23	*.07	*.00	*.00	*.00	*.00	*.00	*.00	*.00
					*.16	*.16	*.37++	*.11	*.00	*.19	*.00	*.00	*.00	*.00	*.00
					*.11	-.10	*.52++	-.10	*.00	*.07	*.00	*.00	*.00	*.00	*.00
							*.59++	*.04	*.00	*.09	*.00	*.00	*.00	*.00	*.00
							*.38++	*.17	*.00	*.28+	*.00	*.00	*.00	*.00	*.00
							*.34++	*.07	*.05	*.19	*.00	*.00	*.00	*.00	*.00
							*.13	*.22	*.11	*.04	*.00	*.00	*.00	*.00	*.00
								*.01	-.04	-.11	*.00	*.00	*.00	*.00	*.00

TABLE 74 EXPERIMENT 24 YEAR 1978

REGION - AFRICA	COUNTRY - SUDAN
SITE - ABU-NAAMA	ELATION - 0 M
LATITUDE - 12 DEG.	LONGITUDE - 34 DEG. 3 MIN. E
COOPERATOR - FATHI MOHAMAD KHALIFA	
DATE PLANTED - JULY 18, 1978	DATE HARVESTED NOVEMBER, 1978
SOIL TYPE - SAND 14%, SILT 18%, CLAY 68%, PH 9.1	
FERTILIZER USED (KG/HA) - N 25.0, P 26.4	
AMOUNT OF MOISTURE - 300 MM	
NUMBER OF IRRIGATIONS - 11	

TABLE 74 EXPERIMENT 24 YEAR 1978 (CONTINUED)

YEAR 1973

TABLE 74

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	FODS PER PLANT	FOD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
2	UFV-1	1.50	155.50	36.25	8.25	11.48	3.25	61.00	47.0
8	CARIBE	1.25	179.50	52.75	12.50	11.38	3.00	53.00	48.6
15	COBB	2.00	167.75	32.50	9.50	13.73	2.75	66.00	43.2
7	TUNIA	2.00	173.75	20.75	9.50	14.03	3.75	38.00	43.8
16	GASOY 17	2.00	183.00	28.25	7.50	11.83	3.25	52.00	44.2
13	WILLIAMS	2.00	183.75	22.75	10.00	13.78	3.75	50.00	45.1
14	RANSOM	2.50	175.25	30.00	10.25	13.73	2.75	53.00	45.4
11	RILLITO	2.00	178.75	33.75	8.50	12.75	3.50	23.00	41.6
4	HARDEE LS	2.00	160.75	39.00	10.75	14.00	2.50	72.00	42.0
9	JUPITER	1.75	166.25	35.00	11.50	11.70	3.00	53.00	42.6
5	ORBA	4.25	180.50	24.25	18.75	9.88	3.50	76.00	41.6
12	BOSIER	1.75	174.00	33.50	9.50	12.28	4.25	46.00	46.4
6	IAC-2	2.25	173.25	33.75	12.00	13.10	3.50	63.00	45.3
10	IMPROVED FELICAN	3.25	191.75	19.75	12.75	10.28	3.25	64.00	45.1
3	SJ-2	2.25	155.25	35.00	11.50	10.75	3.75	54.00	42.9
1	CH-3	2.00	152.25	36.00	12.50	10.53	2.25	78.00	44.0
STANDARD ERROR OF A VARIETY MEAN									
COEFFICIENT OF VARIATION									
5% LSD VARIETY MEANS (*****NS=NS)									
C O R R E L A T I O N S (+ - PROB=.05) (+ - PROB=.01)									
YIELD	KG./HA	- .27+	.35++	.04	- .14	.27+	- .21	- .02	- .02
DAYS TO FLOWER		- .22	- .02	.25+	.09	.11	- .01	- .10	- .10
DAYS TO MATURITY		- .38++	- .22	.55++	- .11	.10	- .25+	- .25+	- .13
NUDLE ABUND 1		- .16	- .05	- .15	- .08	- .12	- .02	- .02	- .02
NUDLE ABUND 2		- .09	- .18	- .04	.04	- .25+	- .05	- .05	- .05
NUDLE ACT. 1		.01	.01	.29+	- .06	.19	- .20	- .26+	- .26+
NUDLE ACT. 2		.17	.08	- .12	.09	- .05	- .12	- .05	- .05
FLANT HEIGHT		- .06	- .13	.45++	.60++	- .30+	- .19	- .18	- .18
LOGGING		.38++	- .20	- .11	.68++	- .39++	- .02	- .24	- .24
SHATTER		1.00	.07	.42+	.50++	- .24	- .04	- .23	- .23
PLANTS HARVEST		.07	1.00	.26+	- .05	.15	- .22	- .18	- .18
FODS PER PLANT		- .42++	- .26+	1.00	- .06	.08	- .14	- .03	- .03
FOD HEIGHT		.50++	- .05	- .06	1.00	- .39++	- .17	- .39++	- .39++
100 SEED WEIGHT		- .24	.15	.08	.39++	- .11	- .00	- .30+	- .30+
QUALITY OF SEED		- .04	.22	- .14	.17	- .11	1.00	- .29+	- .29+
PERCENT GERM.		.23	.18	.03	.39++	- .30+	- .30+	- .00	- .00

TABLE 75 EXPERIMENT 49 YEAR 1978

REGION - AFRICA
SITE - HALIMA
LATITUDE - 7 DEG. N
COOPERATOR - D. HOPKINSON
DATE PLANTED - JULY 22, 1978
SOIL TYPE - SAND 71%, SILT 20%, CLAY 9%, PH 6.7
AMOUNT OF MOISTURE - 721 MM

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
9 JUPITER	1439.87 40.25 .00 4.00 4.00 100.00 97.50 46.33 1.00									
6 IAC-2	1414.87 33.00 .00 4.00 4.00 100.00 95.00 57.18 1.75									
12 BOSSIER	1324.01 33.00 .00 4.00 3.75 100.00 98.75 41.80 1.00									
5 ORBA	1321.10 33.00 .00 4.00 4.00 100.00 92.50 53.30 2.75									
3 SJ-2	1214.83 34.50 .00 4.00 4.00 100.00 92.50 46.73 1.25									
2 UFV-1	1191.90 33.00 .00 4.00 3.75 97.50 93.75 29.10 1.00									
8 CARIBE	1150.23 33.00 .00 4.00 4.00 100.00 98.75 63.90 1.25									
7 TUNIA	1127.31 30.00 .00 4.00 3.75 98.75 96.25 40.03 1.00									
10 IMPROVED FELICAN	1098.14 33.00 .00 4.00 4.00 100.00 78.75 44.63 1.50									
15 COBB	1098.14 24.25 .00 4.00 4.00 28.75 82.50 27.23 1.25									
13 WILLIAMS	1096.05 21.00 .00 4.00 4.00 95.00 73.75 35.43 3.50									
4 HARDEE LS	1090.22 39.75 .00 4.00 3.50 100.00 93.75 30.05 1.00									
1 CH-3	1018.95 33.00 .00 4.00 4.00 100.00 92.50 62.13 1.75									
11 RILLITO	964.78 25.25 .00 4.00 4.00 100.00 82.50 36.33 2.00									
14 RANSOM	737.65 23.00 .00 4.00 4.00 100.00 75.00 25.23 1.50									
16 GASOY 17	529.27 21.00 .00 4.00 4.00 100.00 81.25 23.33 2.00									
GRAND MEAN	1113.58 30.63 .00 4.00 3.92 99.38 89.06 41.42 1.52									
STANDARD ERROR OF A VARIETY MEAN	158.50 .36 .00 .00 .13 1.08 4.78 2.68 .22									
COEFFICIENT OF VARIATION	28.47% 2.33% .00% .00% 6.67% 2.17% 10.74% 12.93% 27.96%									
5% LSD VARIETY MEANS (*****=NS)	451.46 1.02 .00 .00 ***** ***** 13.63 .63									
CORRELATIONS										
YIELD KG/HA	1.00 *394+ .00 .00 *01 *1.3 *21 *534+ *.02									
DAYS TO FLOWER	.394+ 1.00 .00 .00 *22 *23 *21 *464+ -.454+									
DAYS TO MATURITY	.00 .00 1.00 .00 .00 .00 .00 .00 .00									
NODULE ABUND 1	.00 .00 .00 1.00 .00 .00 .00 .00 .00									
NODULE ABUND 2	.01 -.22 .00 .00 1.00 *03 .20 .11 .22									
NODULE ACT. 1	.13 *23 .00 .00 1.00 *14 *19 *28+ -.28+									
NODULE ACT. 2	.21 *534+ .00 .00 *20 *14 *00 *424+ -.424+									
PLANT HEIGHT	.534+ *464+ .00 .00 *11 *19 *26+ 1.00 *11									
LOGGING	-.02 *454+ .00 .00 *22 *28+ *424+ *1.00 *1.00									
SHATTER	.16 *15 .00 .00 *07 *07 *21 *394+ *08									
HARVEST	.364+ *08 .00 .00 *01 *08 *07 *04 *10									
PLANTS PER POD	*484+ *334+ .00 .00 *16 *06 *30+ *.01									
POD HEIGHT	.22 *25+ .00 .00 *00 *394+ *02 *494+ *.28+									
100 SEED WEIGHT	.17 *01 .00 .00 *23 *13 *01 *334+ *.28+									
QUALITY OF SEED	-.17 *04 .00 .00 *13 *264 *09 *12 *29+									
PERCENT GERM.	.00 .00 .00 .00 *00 *00 *00 *00 *00									

(+) - PROB=.05 (+) - FDR=.01)

TABLE 75 EXPERIMENT 49 YEAR 1973 (CONTINUED)

EXPERIMENT 49 YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER HARVEST	PODS PER PLANT	FOD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
9	JUPITER	1.25	120.00	33.50	10.50	18.73	3.50
6	TAC-2	1.00	120.25	30.75	13.25	16.98	2.25
12	BOSSIER	1.00	131.25	23.00	7.25	17.75	3.25
5	ORBA	1.00	128.50	31.25	12.50	12.95	2.25
3	SJ-2	1.00	99.75	21.25	11.75	14.98	2.50
2	UFU-1	1.00	118.50	27.00	5.13	16.73	2.25
8	CARIBE	2.25	129.75	29.25	8.25	13.98	2.75
7	TUNIA	1.00	113.50	20.00	8.75	19.30	3.25
10	IMPROVED FELICAN	1.00	140.50	25.50	11.50	13.53	2.25
15	COBB	1.00	146.50	22.00	8.50	16.60	3.00
13	WILLIAMS	1.00	118.25	21.00	8.75	17.18	2.00
4	HARDEE LS	1.00	132.00	28.75	8.00	17.53	3.50
1	CH-3	1.00	97.00	18.50	11.00	14.33	3.25
11	RILLITO	1.00	138.75	31.50	9.00	15.45	2.50
14	RANSOM	1.00	116.00	18.75	6.50	17.38	3.75
16	GASOY 17	1.00	118.50	14.25	7.75	15.33	3.50
STANDARD ERROR OF A VARIETY MEAN		1.09	123.06	24.77	9.27	16.20	2.86
COEFFICIENT OF VARIATION		.13	7.30	4.60	1.11	.58	.32
5% LSD VARIETY MEANS (*****NS)		24.332	11.86%	37.11%	23.94%	7.17%	22.47%
		.38	20.73	*****	3.16	1.66	.92
CORRELATIONS (4 - PROB=.05 4+ - PROB=.01)							
YIELD KG/HA							
DAYS TO FLOWER	.16	*.384+	*.484+	.22	.17	-.17	*.00
DAYS TO MATURITY	.15	-.08	*.334+	.25+	*.01	*.04	*.00
NUDULE ABUND 1	.00	*.00	*.00	*.00	*.00	*.00	*.00
NUDULE ABUND 2	.00	*.00	*.00	*.00	*.00	*.00	*.00
NUDULE ACT. 1	.07	*.01	*.16	*.394+	-.23	-.13	*.00
NUDULE ACT. 2	.07	*.08	-.08	*.16	-.13	*.264	*.00
PLANT HEIGHT	.21	-.07	*.06	*.02	*.01	*.09	*.00
LODGING	.04	*.394+	*.304+	*.494+	-.334+	-.12	*.00
SHATTER	.08	-.10	*.01	*.284	*.284	*.294	*.00
PLANTS HARVEST	1.00	.07	*.254	-.11	-.12	*.04	*.00
PLANTS PLANT	.07	1.00	*.19	*.19	-.02	-.00	-.11
FOD HEIGHT	.254	*.19	1.00	*.13	*.02	*.01	*.00
100 SEED WEIGHT	-.1.1	-.02	*.02	-.344+	-.344+	-.21	*.00
QUALITY OF SEED	-.12	-.00	*.01	-.21	*.264	1.00	*.00
PERCENT GERM.	.04	-.04	*.00	*.00	*.00	*.00	1.00

TABLE 76 EXPERIMENT 165 YEAR 1978

REGION - AFRICA
 SITE - KADUGLI
 LATITUDE - 11 DEG. N
 COOPERATOR - OMER E. SIMSAA

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAKS TO FLOWER	DAKS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
16	CRAWFORD	1748.18	19.50	.00	.00	.00	.00	.00	.00	.00
5	RANSOM	1744.89	25.50	.00	.00	.00	.00	.00	.00	.00
6	COBB	1720.34	24.00	.00	.00	.00	.00	.00	.00	.00
8	FORREST	1613.32	27.00	.00	.00	.00	.00	.00	.00	.00
14	MITCHELL	1599.99	18.00	.00	.00	.00	.00	.00	.00	.00
13	CUTLER 71	1531.26	19.50	.00	.00	.00	.00	.00	.00	.00
3	BOSSIER	1457.54	35.75	.00	.00	.00	.00	.00	.00	.00
11	CALLAND	1434.00	18.00	.00	.00	.00	.00	.00	.00	.00
9	DAVIS	1383.78	29.75	.00	.00	.00	.00	.00	.00	.00
10	GASOY 17	1348.94	18.00	.00	.00	.00	.00	.00	.00	.00
12	FRANKLIN	1297.05	18.00	.00	.00	.00	.00	.00	.00	.00
4	WILLIAMS	1218.08	18.00	.00	.00	.00	.00	.00	.00	.00
15	BRAGG	1213.24	24.75	.00	.00	.00	.00	.00	.00	.00
1	IMPROVED PELICAN	1208.20	34.00	.00	.00	.00	.00	.00	.00	.00
7	JAMES	1205.66	23.25	.00	.00	.00	.00	.00	.00	.00
2	RILLITO	1115.89	26.25	.00	.00	.00	.00	.00	.00	.00
STANDARD ERROR OF A VARIETY MEAN		1427.52	23.70	.00	.00	.00	.00	.00	.00	.00
COEFFICIENT OF VARIATION		202.05	1.00	.00	.00	.00	.00	.00	.00	.00
5% LSD VARIETY MEANS (*****NS)		28.31% *****NS	8.43% 2.85	.00%	.00%	.00%	.00%	.00%	.00%	.00%
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00	-*.15	.00	.00	.00	.00	.00	.00	.00
DAKS TO FLOWER		-.15	1.00	.00	.00	.00	.00	.00	.00	.00
DAKS TO MATURITY		.00	-.00	1.00	.00	.00	.00	.00	.00	.00
NODULE ABUND 1		.00	.00	1.00	.00	.00	.00	.00	.00	.00
NODULE ABUND 2		.00	.00	.00	1.00	.00	.00	.00	.00	.00
NODULE ACT. 1		.00	.00	.00	.00	1.00	.00	.00	.00	.00
NODULE ACT. 2		.00	.00	.00	.00	.00	1.00	.00	.00	.00
PLANT HEIGHT		-.46++	-.23	.00	.00	.00	.00	.00	.00	.00
LODGING		.00	.00	.00	.00	.00	.00	.00	.00	.00
SHATTER		.00	.00	.00	.00	.00	.00	.00	.00	.00
PLANTS HARVEST		-.30+	-.26+	.00	.00	.00	.00	.00	.00	.00
PODS PER PLANT		.17	-.05	.00	.00	.00	.00	.00	.00	.00
POD HEIGHT		-.06	*.10	.00	.00	.00	.00	.00	.00	.00
100 SEED WEIGHT		.27+	-.36++	.00	.00	.00	.00	.00	.00	.00
QUALITY OF SEED		-.57++	*.26+	.00	.00	.00	.00	.00	.00	.00
PERCENT GERM.		.31+	*.00	.00	.00	.00	.00	.00	.00	.00

TABLE 76 EXPERIMENT 165 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
16	CRAWFORD	.00	117.50	29.50	7.85	15.10	2.25	89.75
5	RANSOM	.00	220.25	20.90	8.15	13.90	2.50	86.00
6	COBB	.00	147.25	26.25	7.55	14.95	2.00	89.25
8	FORREST	.00	122.50	29.60	8.45	12.70	4.75	56.25
14	MITCHELL	.00	138.50	21.10	8.20	14.65	3.25	66.25
13	CUTLER 71	.00	223.00	18.55	10.90	14.75	2.75	70.75
3	BOSSIER	.00	151.25	21.90	11.10	13.15	3.25	85.25
11	CALLAND	.00	219.50	9.80	13.45	12.90	3.25	44.25
9	DAVIS	.00	124.75	23.80	6.00	14.55	2.25	56.75
10	GASOY 17	.00	178.00	17.50	6.70	14.35	2.25	90.00
12	FRANKLIN	.00	167.50	69.50	8.10	13.43	3.00	75.00
4	WILLIAMS	.00	213.00	15.20	9.80	14.43	3.25	86.75
15	BRAGG	.00	194.50	15.90	10.75	13.30	3.75	66.50
1	IMPROVED PELICAN	.00	201.00	20.65	14.40	10.63	4.00	82.00
7	JAMES	.00	191.50	13.90	11.65	13.50	2.25	71.00
2	RILLITO	.00	116.75	26.60	7.28	12.70	4.00	85.75
STANDARD ERROR OF A VARIETY MEAN		.00	170.42	23.79	9.40	13.69	3.08	75.09
STANDARD COEFFICIENT OF VARIATION		.00%	16.81	13.46	1.22	*.63	*.44	7.08
5% LSD VARIETY MEANS (*****=NS)		.00	19.73%	113.15%	25.93%	9.27%	28.58%	18.86%
5% LSD VARIETY MEANS (*****=NS)		47.89	*****	3.47	1.81	1.25	20.17	
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)								
YIELD	KG/HA	.00	*.30+	.17	-.06	*.27+	-.57++	*.31+
DAYS TO FLOWER	.00	-*.26+	-.05	.10	-.36++	.26+	.00	.00
DAYS TO MATURITY	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ABUND 1	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ABUND 2	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 1	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 2	.00	.00	.00	.00	.00	.00	.00	.00
PLANT HEIGHT	.00	*.29+	.15	.30+	.07	-.27+	.26+	
LODGING	.00	.00	.00	.00	.00	.00	.00	.00
SHATTER	1.00	.00	.00	.00	.00	.00	.00	.00
PLANTS HARVEST	.00	1.00	-.20	*.47++	-.15	*.31+	.19	
PODS PER PLANT	.00	-.20	1.00	-.10	*.35++	-.04	.16	
POD HEIGHT	.00	*.47++	-.10	1.00	*.37++	.20	-.19	
100 SEED WEIGHT	.00	-.15	*.35++	-.37++	1.00	*.39++	.25	
QUALITY OF SEED	.00	-.31+	-.04	.20	-.39++	1.00	-.49++	
PERCENT GERM.	.00	.19	.16	-.19	.25	-.49++	1.00	

TABLE 77 EXPERIMENT 12 YEAR 1978

REGION - AFRICA
 SITE - WAD MEDANI
 LATITUDE - 14 DEG. 24 MIN. N
 COOPERATOR - OSMAN A.A. AGEDD
 DATE PLANTED - JULY 6, 1978
 SOIL TYPE - VERTISOL SULEIMI SERIES, SAND 30%, SILT 18%, CLAY 52%, PH 8.5
 FERTILIZER USED (KG/HA) - N 25.0, P 25.0, K 25.0
 AMOUNT OF MOISTURE - 254 MM
 NUMBER OF IRRIGATIONS - 9

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
4	HARDEE LS	2714.29	46.00	109.50	2.00	1.50	92.50	100.00	43.00	1.00
9	JUPITER	2622.61	44.00	98.50	3.00	1.50	95.00	100.00	55.75	1.00
2	UFV-1	2515.92	39.00	104.50	2.50	1.50	96.25	96.25	28.75	1.00
8	CARIBE	2439.24	46.50	117.00	2.50	2.00	98.75	100.00	79.50	1.00
16	CORB	2179.19	28.00	94.25	2.25	2.00	98.75	100.00	31.00	1.00
14	WILLIAMS	2101.25	23.00	89.00	2.50	1.50	93.75	100.00	33.50	1.00
12	RILLITO	1899.55	28.00	96.00	2.00	1.50	92.50	100.00	37.25	1.00
6	TAC-2	1894.13	42.00	107.00	2.50	1.50	96.25	98.75	59.00	1.50
15	RANSOM	1890.39	25.00	87.25	1.50	1.75	98.75	98.75	26.00	1.00
13	ROSSIER	1861.21	34.00	88.00	2.50	1.75	98.75	100.00	40.25	1.00
5	ORBA	1590.73	42.00	91.25	2.00	2.00	96.25	95.00	63.75	1.50
10	IMPROVED FELICAN	1550.31	34.50	93.50	4.00	2.50	93.75	87.50	53.50	1.00
7	TUNIA	1509.89	34.50	119.75	2.25	2.00	98.75	95.00	48.00	1.00
3	SJ-2	1231.50	42.00	85.50	4.00	2.00	96.25	98.75	49.25	1.00
1	CH-3	1200.24	37.50	117.00	2.00	1.25	100.00	96.25	25.25	2.00
11	KAHALA	1123.56	28.00	78.00	2.25	2.50	95.00	100.00	34.00	1.00
<hr/>										
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****NS)										

CORRELATIONS (++ - PROB=.05, + - PROB=.01)

YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING	SHATTER	PLANTS HARVEST	FODS PER PLANT	FOD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	GERM PERCENT
1.00	.22	.20	-.09	-.30+	-.08	-.19	-.10	-.29+	-.19	-.10	.19	.19	.10	.10	.06
	1.00	.51++	.15	.06	.02	.01	.64++	.64++	.02	.01	.52++	.52++	.52++	.52++	.22
		.20	.51++	1.00	-.17	-.22	.10	-.07	.10	.07	-.13	-.13	-.13	-.13	.27+
			.15	-.17	1.00	.35++	-.13	-.13	-.13	-.13	-.13	-.13	-.13	-.13	.19
			-.06	-.22	.35++	1.00	.05	.05	.05	.05	.04	.04	.04	.04	.26+
			-.08	-.02	.10	-.11	.05	1.00	1.00	1.00	.08	.08	.08	.08	.11
				.01	-.07	-.13	-.03	-.16	-.16	1.00	-.08	-.08	-.08	-.08	.11
				.10	.64++	.52++	.13	-.04	.04	1.00	1.00	1.00	1.00	1.00	.49++
					.19	.29+	-.19	.26+	.26+	.11	-.11	-.11	-.11	-.11	1.00
						-.44++	-.02	.43++	.43++	.04	-.03	-.03	-.03	-.03	.04
							-.49++	-.03	.24	-.04	-.00	-.00	-.00	-.00	.34++
								.37++	.15	-.13	.12	.12	.12	.12	.22
									.51++	.15	-.04	.04	.04	.04	.28++
									.57++	.11	-.23	.28+	.28+	.28+	.28+
										.64++	.10	.12	.02	.02	.02
											.01	.18	.26+	.15	.15
													.10	.01	.01
															.31+

TABLE 77 EXPERIMENT 12 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
4	HARDEE LS	1.00	162.50	30.25	10.00	15.23	2.00	32.50	46.5	18.0
9	JUFITER	1.00	190.75	37.00	13.00	14.45	2.00	36.25	40.8	25.4
2	UFV-1	1.00	167.00	32.75	8.75	16.58	2.25	52.50	45.8	21.1
8	CARIBE	1.00	171.00	46.75	12.00	11.45	1.00	36.25	46.8	19.0
16	COBB	3.00	230.25	26.50	9.50	15.68	2.50	73.75	41.1	24.3
14	WILLIAMS	2.00	268.75	15.00	8.50	18.95	3.00	22.50	45.1	24.4
12	RILLITO	2.00	205.00	25.75	7.75	15.38	3.75	23.75	45.7	22.1
6	IAC-2	2.00	160.50	35.00	12.25	16.20	1.75	47.50	43.5	22.9
15	RANSOM	2.00	241.75	18.25	8.25	16.88	3.75	38.75	43.6	24.3
13	BOSSIER	2.00	207.75	29.00	9.75	16.03	3.00	27.50	43.8	22.5
5	OREA	3.00	204.25	34.50	9.50	12.38	2.75	38.75	41.4	20.9
10	IMPROVED FELICAN	2.50	239.75	27.50	10.50	13.00	2.75	57.50	45.4	23.6
7	TUNIA	3.00	206.00	29.00	12.25	16.80	3.25	38.75	46.0	16.8
3	SJ-2	2.25	168.00	42.75	10.50	13.00	2.75	77.50	43.1	22.0
1	CH-3	2.00	206.00	35.75	13.00	14.98	2.25	61.25	43.3	20.9
11	KAHALA	4.50	260.00	23.50	9.50	15.75	3.50	27.50	47.4	20.7
STANDARD ERROR OF A VARIETY MEAN		2.14	205.58	30.58	10.31	15.17	2.64	46.41		
COEFFICIENT OF VARIATION		.12	10.76	3.35	.60	.56	.32	10.29		
5% LSD VARIETY MEANS (*****=NS)		11.45%	10.46%	23.20%	11.72%	7.38%	24.17%	44.34%		
5% LSD VARIETY MEANS (*****=NS)		.35	30.64	10.11	1.72	1.60	.91	29.31		
CORRELATIONS (+ - PROB=.05) (+ - PROB=.01)										
YIELD	KG/HA	-.63++	-.21	-.02	-.03	*.10	-.52++	-.14		
DAYS TO FLOWER	-.47++	-.73++	-.70++	-.48++	-.57++	-.64++	-.25+			
DAYS TO MATURITY	-.44++	-.49++	-.37++	.51++	-.11	-.46++	-.01			
NODEL ABUND 1	-.02	-.03	-.15	.15	-.23	-.10	.18			
NODEL ABUND 2	-.43++	.24	-.13	-.04	-.28+	.12	.26+			
NOTULE ACT. 1	*.01	-.04	.16	.20	-.02	.02	.10			
NOTULE ACT. 2	-.03	-.00	.12	.02	-.02	.02	.15			
PLANT HEIGHT	-.18	-.34++	.64++	.67++	-.60++	-.47++	.19			
LOGGING	.04	-.06	.22	.28+	-.09	-.11	.31+			
SHATTER	1.00	.50++	-.26+	-.13	.06	*.45++	.16			
PLANTS HARVEST	.50++	1.00	-.59++	-.27+	*.33++	*.40++	-.02			
PLANT HEIGHT	-.26+	-.59++	1.00	.42++	-.59++	-.39++	.32++			
PODS PER POD	-.13	-.27+	-.42++	1.00	-.26+	-.40++	.13			
100 SEED WEIGHT	.06	*.33++	-.59++	-.26+	1.00	.23	.23			
QUALITY OF SEED	.45++	.40++	-.39++	-.40++	*.23	1.00	-.23			
GERM.	.16	-.02	.32++	.13	-.33++	-.23	1.00			

TABLE 78 EXPERIMENT 14 YEAR 1978

REGION - AFRICA
COUNTRY - TANZANIA
SITE - MOROGORO ELEVATION - 525 M
LATITUDE - 5 DEG. 80 MIN. S LONGITUDE - 37 DEG. E
COOPERATOR - K.W. MAY DATE HARVESTED - JULY, 1973
DATE PLANTED - APRIL 8, 1978
SOIL TYPE - SILT 62%, SILT 16%, CLAY 22%, PH 6.6
FERTILIZER USED (KG/HA) - N 25.0, P 26.4
AMOUNT OF MOISTURE - 232 MM

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING		
11	RILLITO	1281.51	71.00	114.00	.00	.00	.00	.00	*.00	38.30	1.00	*.00
13	WILLIAMS	1246.08	71.00	114.00	.00	.00	.00	.00	*.00	40.00	1.00	*.00
6	JAC-2	1104.39	89.00	123.00	.00	.00	.00	.00	*.00	57.30	1.00	*.00
14	RANSOM	1046.04	71.00	124.00	.00	.00	.00	.00	*.00	29.55	1.00	*.00
5	CREA	1008.53	73.00	114.00	.00	.00	.00	.00	*.00	52.65	1.00	*.00
2	UFV-1	958.62	75.00	132.00	.00	.00	.00	.00	*.00	31.50	1.00	*.00
12	BOSSIER	937.69	76.00	126.00	.00	.00	.00	.00	*.00	42.40	1.00	*.00
7	TUNIA	887.68	71.00	134.00	.00	.00	.00	.00	*.00	57.15	1.00	*.00
15	COBB	877.26	71.00	135.50	.00	.00	.00	.00	*.00	30.00	1.00	*.00
10	IMPROVED FELICAN	854.34	75.00	120.00	.00	.00	.00	.00	*.00	54.30	1.00	*.00
8	CARIBE	854.34	73.00	122.00	.00	.00	.00	.00	*.00	53.55	1.00	*.00
4	HARDEE LS	654.30	85.50	140.75	.00	.00	.00	.00	*.00	61.55	1.00	*.00
9	JUPITER	614.71	80.50	132.50	.00	.00	.00	.00	*.00	68.95	1.00	*.00
3	SJ-2	604.29	79.50	135.50	.00	.00	.00	.00	*.00	64.65	1.00	*.00
16	GASOY 17	552.19	71.00	143.00	.00	.00	.00	.00	*.00	27.85	1.00	*.00
1	CH-3	285.47	74.50	139.50	.00	.00	.00	.00	*.00	66.35	1.00	*.00
GRAND MEAN												
STANDARD ERROR OF A VARIETY MEAN												
COEFFICIENT OF VARIATION												
5% LSD VARIETY MEANS (*****NS)												
C O R R E L A T I O N S												
(+ - PROB=.05 + - PROB=.01)												

TABLE 78

EXPERIMENT 14

(CONTINUED)

YEAR 1978

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
11 RILLITO	1.00	204.25	23.60	7.40	18.55	1.50	.00	45.7	19.7
13 WILLIAMS	1.00	205.75	17.70	9.25	21.60	2.00	.00	45.1	17.8
13 TAC-2	1.00	214.25	29.85	11.60	18.03	1.75	.00	44.2	20.3
6 RANSOM	1.00	249.25	16.00	7.50	19.65	1.50	.00	45.1	18.5
14 ORBA	4.50	199.75	23.65	12.25	13.75	2.50	.00	44.6	17.7
2 UFU-1	1.00	223.25	19.00	9.25	17.63	1.50	.00	45.6	20.0
12 BOSSIER	1.00	226.25	22.00	11.35	19.45	2.25	.00	45.8	17.5
7 TUNIA	1.00	207.25	26.25	10.30	21.40	2.50	.00	43.6	19.9
15 COBB	1.00	246.00	15.20	8.95	19.38	2.25	.00	47.8	16.8
10 IMPROVED FELICAN	1.00	260.75	20.50	11.75	16.30	2.75	.00	47.4	16.9
8 CARIBE	1.00	217.00	26.65	8.30	14.23	2.00	.00	44.9	18.9
4 HARDEE LS	1.00	180.25	25.20	14.75	16.18	4.00	.00	46.0	17.5
9 JUPITER	3.50	164.50	22.65	16.55	18.83	4.00	.00	44.0	18.4
3 SJ-2	1.25	204.25	27.80	12.80	16.93	3.50	.00	45.6	17.6
16 GASOY 17	1.25	251.50	12.30	8.60	21.63	3.00	.00	44.5	18.9
1 CH-3	1.00	167.50	26.70	12.50	16.20	4.35	.00	42.3	19.4
STANDARD ERROR OF A VARIETY MEAN									
COEFFICIENT OF VARIATION									
5% LSD VARIETY MEANS (*****=NS)									
CORRELATIONS (+ - PROB=.05) (+ - PROB=.01)									
YIELD KG/HA	-.04	*16	-.02	-.394+	*24	*734+	.00		
DAYS TO FLOWER	+.05	-.274	*444+	*594+	-.23	*24	.00		
DAYS TO MATURITY	-.18	-.08	*03	*264	*15	*534+	.00		
NODULE ABUND 1	*00	*00	*00	*00	*00	*00	.00		
NODULE ABUND 2	*00	*00	*00	*00	*00	*00	.00		
NODULE ACT. 1	*00	*00	*00	*00	*00	*00	.00		
NODULE ACT. 2	*00	*00	*00	*00	*00	*00	.00		
PLANT HEIGHT	*274	-.474+	*654+	*754+	*324+	*534+	.00		
LOGGING	*00	*00	*00	*00	*00	*00	.00		
SHATTER	1.00	-.22	-.01	*424+	-.24	*16	.00		
PLANTS HARVEST	-.22	1.00	-.504+	-.354+	*08	*374	.00		
PODS PER PLANT	-.01	-.504+	1.00	*334+	-.23	*274	.00		
POD HEIGHT	*424+	-.354+	*334+	1.00	-.20	*644	.00		
100 SEED WEIGHT	-.24	*08	-.23	-.20	1.00	*14	.00		
QUALITY OF SEED	*16	-.374+	*274	*644+	-.14	*100	.00		
PERCENT GERM.	*00	*00	*00	*00	*00	*400	.00		

TABLE 79 EXPERIMENT 2 YEAR 1978

REGION - AFRICA
 SITE - ZANZIBAR
 LATITUDE - 6 DEG. S
 COOPERATOR - F.A.O./UNDP RICE AND FOOD CROP PROJECT
 DATE PLANTED - AUGUST 3, 1978
 SOIL TYPE - LOAMY, PH 6.5
 FERTILIZER USED (KG/HA) - N 25.0, P 26.4, K 24.9
 AMOUNT OF MOISTURE - 793 MM

COUNTRY - TANZANIA

ELEVATION - 30 M
 LONGITUDE - 38 DEG. E
 CROP PROJECT
 DATE HARVESTED - OCTOBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	MODULE ABUND 1	MODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING	CORRELATIONS (+ = PROB=.05 +1 = PROB=.01)			
											NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
14	WILLIAMS	2800.56	22.75	59.00	3.00	3.25	97.50	100.00	110.00	1.50				
12	RILLITO	2067.08	23.00	63.00	3.25	3.75	98.75	83.75	136.00	1.25				
15	ORBA	1948.31	27.75	71.00	3.25	3.75	98.75	86.25	120.00	1.00				
11	KAHALA	1839.12	23.50	61.00	3.25	2.75	97.50	78.75	94.00	1.75				
10	IMPROVED FELICAN	1700.34	27.25	73.50	3.50	3.25	87.50	85.00	112.00	1.75				
8	CARIBE	1667.00	26.75	62.00	3.00	4.00	98.75	83.75	76.00	2.00				
7	TUNIA	1591.98	24.75	84.00	3.25	3.75	100.00	67.50	57.00	1.75				
6	JAC-2	1516.97	17.00	83.00	3.00	2.50	97.50	71.25	87.00	2.00				
3	SJ-2	1433.62	30.75	71.50	3.50	3.50	100.00	100.00	86.00	2.25				
13	BOSSIER	1427.37	25.25	61.00	3.25	3.75	98.75	95.25	88.00	2.00				
1	CH-3	1387.78	27.25	97.50	3.00	3.50	98.75	90.00	86.00	2.25				
15	RANSOM	933.52	22.25	85.00	2.25	4.00	98.75	90.00	58.00	1.25				
9	JUFITER	911.43	32.75	97.50	3.50	4.50	100.00	96.25	100.00	1.75				
4	HARDEE LS	833.50	31.00	94.75	3.25	3.25	98.75	86.25	89.00	2.75				
2	UFU-1	808.49	26.50	97.50	3.75	4.50	100.00	61.25	94.50	1.75				
16	COBB	744.73	22.00	72.50	3.00	2.25	100.00	86.25	94.00	1.00				
GRAND MEAN														
STANDARD ERROR OF A VARIETY MEAN														
COEFFICIENT OF VARIATION														
5% LSD VARIETY MEANS (*****NS)														
+1 = PROB=.05 +1 = PROB=.01)														
YIELD KG/HA	1.00	-.19	-.48+	.07	-.22	-.08	-.15	-.04	-.00	-.04	.15	.30+		
DAYS TO FLOWER	-.19	1.00	-.42+	.07	-.15	-.04	-.20	-.12	-.19	-.04	.04	.30+		
DAYS TO MATURITY	-.48+	.42+	1.00	-.01	-.01	-.00	-.11	-.23	-.21	-.19	.18	.26+		
NODULE ABUND 1	.07	-.07	-.22	1.00	-.11	1.00	-.00	-.10	-.03	-.00	.05			
NODULE ABUND 2	-.22	-.15	-.04	-.20	-.11	-.00	1.00	-.12	-.18	-.18	.04			
NODULE ACT. 1	-.08	-.04	-.12	-.23	-.00	1.00	-.10	-.12	-.10	-.10	.24			
NODULE ACT. 2	-.15	-.00	-.19	-.21	-.10	-.12	1.00	-.10	-.10	-.10	.10			
PLANT HEIGHT	-.30+	-.04	-.18	-.19	-.03	-.13	-.10	-.13	-.10	-.10	.18			
LODGING	-.14	-.30+	-.26+	-.05	-.05	-.04	-.24	-.18	-.18	-.18	.10			
SHATTER	-.01	-.04	-.03	-.10	-.06	-.11	-.08	-.07	-.07	-.07	.16			
HARVEST	-.25+	-.03	-.23	-.05	-.10	-.08	-.20	-.01	-.01	-.01	.13			
PLANT PODS PER	-.03	-.27+	-.09	-.31+	-.20	-.07	-.06	-.20	-.06	-.20	-.01			
POD HEIGHT	-.21	-.02	-.03	-.02	-.17	-.22	-.03	-.11	-.11	-.11	.11			
100 SEED WEIGHT	.00	-.00	-.00	-.00	-.00	-.00	-.00	-.00	-.00	-.00	.00			
QUALITY OF SEED	.00	-.00	-.00	-.00	-.00	-.00	-.00	-.00	-.00	-.00	.00			
PERCENT GERM.	.00	-.00	-.00	-.00	-.00	-.00	-.00	-.00	-.00	-.00	.00			

TABLE 79 EXPERIMENT 2 YEAR 1978 (CONTINUED)

YEAR 1978

EXPERIMENT

TABLE 79

YEAR 1978

EXPERIMENT

TABLE 79

TABLE 80 EXPERIMENT 64 YE

REGION - AFRICA
 SITE - VALLEE DU KOU
 LATITUDE - 11 DEG. 40 MIN. N
 COOPERATOR - C.E.R.C.I.
 DATE PLANTED - MARCH 6, 1979
 FERTILIZER USED (KG/HA) - N 111.0, P 34.5, K 111.0
 AMOUNT OF MOISTURE - 800 MM
 NUMBER OF IRRIGATIONS - 8 (800 MM)
 COUNTRY - UPPER VOLTA
 ELEVATION - 450 M
 LONGITUDE - 4 DEG. 50 MIN. W
 DATE HARVESTED - JUNE, 1979

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT		LOGGING
									ABUND	ACT.	
7	TUNIA	3842.43	29.00	105.00	4.00	•00	97.50	•00	61.48	1.50	
12	BOSSIER	3400.68	36.00	105.00	4.00	•00	95.00	•00	51.30	1.75	
4	HARDEE LS	3334.00	45.00	128.00	3.50	•00	62.50	•00	50.85	1.00	
9	JUPITER	2971.43	34.50	115.75	5.00	•00	95.00	•00	54.83	1.50	
2	UFV-1	2938.09	34.00	110.75	4.50	•00	85.00	•00	31.80	1.00	
10	IMPROVED PELICAN	2858.90	32.75	105.00	4.50	•00	97.50	•00	78.40	1.75	
1	CH-3	2804.73	34.00	103.50	5.25	•00	46.25	•00	67.35	2.50	
6	IAC-2	2792.22	35.00	110.50	3.75	•00	100.00	•00	89.00	3.00	
8	CARIBE	2738.05	33.00	140.00	4.75	•00	100.00	•00	83.25	1.75	
13	WILLIAMS	2533.84	26.00	80.00	4.00	•00	81.25	•00	50.55	1.75	
5	ORBA	2525.50	34.00	87.00	3.75	•00	80.00	•00	79.13	3.00	
11	RILLITO	2504.67	27.50	80.00	3.75	•00	95.00	•00	49.55	2.25	
3	SJ-2	1962.89	39.00	97.50	4.50	•00	92.50	•00	51.28	1.50	
14	RANSOM	1896.21	25.50	91.00	3.50	•00	93.75	•00	28.85	1.00	
15	COBB	1737.85	25.00	96.50	3.75	•00	100.00	•00	29.30	1.00	
16	GASOY 17	952.27	25.00	91.00	3.75	•00	97.50	•00	24.70	1.00	
GRAND MEAN				2612.11	32.20	102.91	4.14	•00	88.67	•00	56.35
STANDARD ERROR OF A VARIETY MEAN				283.37	.86	.43	.57	•00	7.93	•00	4.65
COEFFICIENT OF VARIATION				21.70%	5.33%	.84%	27.38%	•00%	17.88%	•00%	16.51%
5% LSD VARIETY MEANS (*****NS)				807.16	2.45	1.23	*****	•00	22.58	•00	13.25
											.80
CORRELATIONS (+ - PROB=.05 + - PROB=.01)											
YIELD	KG/HA	1.00	*394+	*364+	*07	•00	-•18	•00	*394+	*22	
DAYS TO FLOWER		*394+	1.00	*574+	*16	•00	-•284	•00	*344+	.11	
DAYS TO MATURITY		*364+		*574+	1.00	•17	•02	•00	*31+	-•13	
NODULE ABUND 1		*07	*16	*1.7	1.00	•00	-•22	•00	*22	-•01	
NODULE ABUND 2		*00	*00	*00	*00	1.00	*00	•00	*00	*00	
NODULE ACT. 1		-.18	-.284	-.02	-.22	•00	1.00	•00	-.22	-.19	
NODULE ACT. 2		*00	*00	*00	*00	•00	*00	1.00	*00	*00	
PLANT HEIGHT		*394+	*344+	*31+	*22	•00	-•22	•00	1.00	*634+	
LOGGING		*22	*11	-.13	-.01	•00	-•19	•00	*634+	1.00	
SHATTER		*00	*00	*00	*00	•00	*00	•00	*00	*00	
PLANTS HARVEST		*15	-.31+	-.12	-.14	•00	-.10	•00	-.06	*06	
PODS PER POD		*14	*634+	*41+	*21	•00	-.16	•00	*524+	*274	
100 SEED WEIGHT		*14	*21	*1.9	-.00	•00	•01	•00	*644+	*394+	
QUALITY OF SEED GERM.		*00	*00	*00	*00	•00	*00	•00	*00	*00	
PERCENT		*00	*00	*00	*00	•00	*00	•00	*00	*00	

TABLE 80 EXPERIMENT 64 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	PODS PER PLANT	HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
7	TUNIA	1.00	102.75	47.50	7.55	*.00	*.00	*.00	46.1
12	BOSSIER	1.00	136.00	72.25	8.15	*.00	*.00	*.00	46.7
4	HARDEE LS	1.00	88.50	89.25	6.75	*.00	*.00	*.00	44.6
9	JUPITER	1.00	113.75	91.75	6.13	*.00	*.00	*.00	44.6
2	UFV-1	1.00	113.25	46.00	3.75	*.00	*.00	*.00	45.0
10	IMPROVED FELICAN	1.00	128.75	58.00	11.35	*.00	*.00	*.00	45.1
1	CH-3	1.00	107.25	118.00	7.83	*.00	*.00	*.00	46.1
6	IAC-2	1.00	100.00	114.50	10.30	*.00	*.00	*.00	46.7
8	CANTRE	1.00	109.00	117.50	8.68	*.00	*.00	*.00	46.8
13	WILLIAMS	1.00	172.75	58.75	5.85	*.00	*.00	*.00	44.3
5	ORBA	1.00	89.75	62.25	9.15	*.00	*.00	*.00	43.0
11	RILLITO	1.00	81.00	66.50	5.10	*.00	*.00	*.00	42.9
3	SJ-2	1.00	52.50	157.25	7.83	*.00	*.00	*.00	43.7
14	RANSOM	1.00	137.75	36.75	5.70	*.00	*.00	*.00	45.8
15	COBB	1.00	145.25	27.00	5.55	*.00	*.00	*.00	43.8
16	GASDY 17	1.00	118.25	20.25	6.78	*.00	*.00	*.00	46.6
STANDARD ERROR OF A VARIETY MEAN									
COEFFICIENT OF VARIATION									
5% LSD VARIETY MEANS (*****NS)									
C O R R E L A T I O N S									
(+ - PROB=.05 ++ - PROB=.01)									
YIELD	KG/HA	.00	*.15	*.14	*.14	*.00	*.00	*.00	*.00
DAYS TO FLOWER		.00	-.31+	.63++	.21	*.00	*.00	*.00	*.00
DAYS TO MATURITY		.00	-.12	*.41++	*.19	*.00	*.00	*.00	*.00
NODULE ABUND 1		.00	-.14	*.21	-.00	*.00	*.00	*.00	*.00
NODULE ABUND 2		.00	-.10	-.16	-.01	*.00	*.00	*.00	*.00
NODULE ACT. 1		.00	-.00	*.00	*.00	*.00	*.00	*.00	*.00
NODULE ACT. 2		.00	-.06	*.52++	*.64++	*.00	*.00	*.00	*.00
PLANT HEIGHT		.00	*.06	*.27+	*.39++	*.00	*.00	*.00	*.00
LOGGING		.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00
SHATTER		1.00	1.00	-.36++	.01	*.00	*.00	*.00	*.00
PLANTS HARVEST		.00	-.36++	1.00	*.34++	*.00	*.00	*.00	*.00
PODS PER PLANT		.00	*.01	*.34++	1.00	*.00	*.00	*.00	*.00
POD HEIGHT		.00	*.00	*.00	*.00	1.00	*.00	*.00	*.00
100 SEED WEIGHT		.00	*.00	*.00	*.00	*.00	1.00	*.00	*.00
QUALITY OF SEED		.00	*.00	*.00	*.00	*.00	*.00	1.00	*.00
GERM PERCENT		.00	*.00	*.00	*.00	*.00	*.00	*.00	1.00

TABLE 81 EXPERIMENT 157 YEAR 1978

REGION - AFRICA
 SITE - KAMINA
 LATITUDE - 7 DEG. S
 COOPERATOR - RONALD MONROE
 DATE PLANTED - FEBRUARY 2, 1979
 AMOUNT OF MOISTURE - 850 MM
 COUNTRY - ZAIRE
 ELEVATION - 1000 M.
 LONGITUDE - 25 DEG. E
 DATE HARVESTED - MAY, 1979

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NOODLE ABUND 1	NOODLE ABUND 2	NOODLE ACT. 1	NOODLE ACT. 2	PLANT HEIGHT	LONGING
3	BOSSIER	2433.82	38.50	101.50	3.75	2.50	95.00	97.50	39.75	1.25
9	DAVIS	2294.21	40.25	105.00	3.75	3.00	97.50	91.25	38.20	1.00
6	CORE	1964.98	39.50	99.00	3.25	2.75	96.25	93.75	22.80	1.00
8	FORREST	1962.89	40.25	100.00	3.75	3.00	88.75	93.75	28.60	1.25
5	RANSOM	1939.97	37.00	104.00	2.75	2.25	97.50	90.00	23.95	1.00
14	MITCHELL	1858.70	36.50	91.00	4.00	3.25	97.50	87.50	27.75	1.00
1	IMPROVED FELICAN	1812.86	41.50	96.25	4.00	3.75	95.00	98.75	37.55	1.25
15	BRAGG	1783.69	37.25	95.25	3.25	2.75	100.00	88.75	26.65	1.75
11	CALLAND	1781.61	34.00	92.75	3.75	3.50	96.25	87.50	26.20	1.50
13	CUTLER 71	1764.94	34.50	90.00	3.25	3.00	95.00	88.75	26.30	1.50
2	RILLITO	1719.09	36.75	92.50	3.00	2.75	96.25	93.75	24.65	1.25
7	JAMES	1706.59	36.75	94.25	3.50	2.75	97.50	90.00	29.00	1.25
4	WILLIAMS	1601.15	34.25	87.50	3.25	2.75	97.50	83.75	21.60	1.75
16	CRAWFORD	1373.19	36.50	89.50	3.00	2.25	93.75	90.00	28.10	1.25
10	GASOY 17	1356.52	36.50	92.75	3.25	3.00	97.50	93.75	20.30	1.00
12	FRANKLIN	1283.59	34.75	90.25	3.75	3.25	97.50	88.75	24.85	1.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****NS)										
4 - PROB=.05										
C O R R E L A T I O N S										
4 - PROB=.01										
YIELD KG/HA	1.00	.55++	.44++	.09	-.05	.15	.14	.47++	-.21	
DAYS TO FLOWER	.55++	1.00	.45++	.16	.05	.05	.41++	.26+		
DAYS TO MATURITY	.44++	.45++	1.00	.04	-.13	-.05	.35++	.23		
NOODLE ABUND 1	.09	.16	.04	1.00	.43++	-.08	.16	.23	-.08	
NOODLE ABUND 2	-.05	.03	-.13	.43++	1.00	.06	.02	-.05	-.14	
NOODLE ACT. 1	.15	.05	-.05	-.08	.06	1.00	-.05	.07	.09	
NOODLE ACT. 2	.14	.39++	.35++	.16	.02	-.05	1.00	.28+	-.17	
PLANT HEIGHT	.47++	.41++	.23	.23	-.05	.07	.28+	1.00	.00	
LODGING	-.21	-.26+	-.23	-.08	-.14	.09	-.17	.00	1.00	
SHATTER	-.27+	-.18	.07	-.07	.13	-.18	.06	-.10	.19	
PLANTS HARVEST	.18	.16	.13	.26+	.17	.09	-.17	.16	.11	
FODS PER PLANT	.56++	.46++	.29+	.02	-.04	-.03	.16	.17	-.14	
FOD HEIGHT	-.04	.06	-.22	.29+	.14	-.07	-.13	.24	.29+	
100 SEED WEIGHT	.01	-.38++	-.29+	-.03	-.12	.30+	-.34++	.21	.17	
QUALITY OF SEED	-.26+	-.35++	-.13	.00	-.18	-.01	-.32++	.04	-.04	
PERCENT GERM.	.21	.34++	-.24	-.03	-.05	.26+	-.04	.19	-.04	

TABLE 81 EXPERIMENT 157 YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
3	BOSSIER	1.25	291.25	18.60	7.70	16.20	1.75	94.75	43.4	21.9
9	DAVIS	1.25	319.50	17.10	6.40	18.33	1.25	96.25	42.2	21.3
6	COBB	1.25	299.00	15.85	6.35	16.88	2.00	94.50	41.2	21.7
8	FORREST	1.25	300.25	14.70	7.25	15.30	2.50	93.00	41.2	21.9
5	RANSOM	1.25	306.00	14.00	5.90	17.50	2.75	92.00	41.5	23.7
14	MITCHELL	1.25	307.50	11.10	7.15	19.35	1.75	96.00	38.8	23.8
1	IMPROVED FELICAN	1.50	333.00	18.20	7.95	12.98	1.75	93.00	44.2	20.9
15	ERAGG	2.00	337.25	11.40	7.40	19.35	1.50	98.00	41.9	21.7
11	CALLAND	1.25	309.50	8.80	7.45	20.68	3.50	91.25	42.5	20.7
13	CUTLER 71	1.50	317.50	9.75	8.45	17.25	2.50	95.25	44.3	20.2
2	RILLITO	1.50	258.25	19.90	5.10	16.73	2.50	96.75	42.6	21.9
7	JAMES	1.75	330.00	8.90	8.50	18.88	2.00	96.00	42.0	22.4
4	WILLIAMS	1.25	296.75	14.60	7.55	21.48	2.00	96.00	42.3	22.5
16	CRAWFORD	1.25	245.00	11.30	7.05	18.33	2.00	95.75	43.7	21.1
10	GASOY 17	1.00	285.75	10.70	5.55	16.70	2.25	96.50	41.1	20.4
12	FRANKLIN	2.00	306.25	9.60	8.00	17.55	2.75	95.50	41.4	20.6
	GRAND MEAN	1.41	302.67	13.41	7.15	17.72	2.17	95.34		
	STANDARD ERROR OF A VARIETY MEAN	.32	11.86	2.25	.45	.96	.23	1.75		
	COEFFICIENT OF VARIATION	45.21%	7.84%	33.53%	12.65%	10.87%	21.38%	3.70%		
	5% LSD VARIETY MEANS (**NS=NS)	****	33.79	6.40	1.29	2.74	.66	*****		
	C O R R E L A T I O N S	(+ - PROB=.05	(+ - PROB=.05	(+ - PROB=.05	(+ - PROB=.05	(+ - PROB=.05	(+ - PROB=.05	(+ - PROB=.05	(+ - PROB=.05	
	YIELD	-.27+	.18	.56++	-.04	.01	-.26+	.21		
	KG/HA	-.18	.16	.46++	.06	.38++	-.35++			
	DAYS TO FLOWER	-.07	.13	.29+	-.22	.29+	-.24			
	DAYS TO MATURITY	-.07	.26+	.02	.29+	.03	.03			
	NODULE ABUND 1	-.07	.13	.04	.14	.12	.18			
	NODULE ABUND 2	-.13	.17	-.03	-.07	.30+	.21			
	ACT. 1	-.18	.09	.16	-.13	.34++	.04			
	ACT. 2	.06	-.17	.16	.17	.24	.21			
	NODULE ACT. 2	-.10	.16	.11	.14	.29+	.17			
	PLANT HEIGHT	-.19	.04	-.11	.06	.01	.09			
	LODGING	1.00	1.00	-.16	.42++	.03	.19			
	SHATTER	.04	-.16	1.00	-.22	.26+	.14			
	PLANTS HARVEST	-.11	-.16	1.00	1.00	.03	.11			
	PLANT HEIGHT	.06	.42++	-.22	.03	.00	.04			
	POD WEIGHT	-.01	.03	-.26+	-.03	.00	.08			
	100 SEED WEIGHT	.09	-.19	-.14	-.03	.04	1.00			
	QUALITY OF SEED	.09	.09	.20	.11	-.08	-.42++			
	PERCENT GERM.	-.09	.10				1.00			

TABLE 82 EXPERIMENT 18 YEAR 1978

REGION - AFRICA
 SITE - MWEBE
 LATITUDE - 5 DEG. S
 COOPERATOR - PLANTATIONS LEVER AU ZAIRE
 DATE PLANTED - NOVEMBER 13, 1978
 FERTILIZER USED (KG/HA) - N 75.0, P 33.0, K 60.3
 AMOUNT OF MOISTURE - 725.0 MM

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING	CORRELATIONS		
											++ - PROB=.05	++ - FREQ=.01)	
9	JUPITER	2221.28	48.00	98.00	*.00	*.00	*.00	*.00	42.00	*.00			
14	RANSOM	1992.06	22.75	92.50	*.00	*.00	*.00	*.00	21.50	*.00			
4	HARDEE LS	1942.05	47.00	98.50	*.00	*.00	*.00	*.00	38.50	*.00			
10	IMPROVED FELICAN	1796.19	37.00	94.25	*.00	*.00	*.00	*.00	46.75	*.00			
7	TUNIA	1750.35	36.25	96.50	*.00	*.00	*.00	*.00	37.25	*.00			
12	BOSSIER	1737.85	62.50	96.75	*.00	*.00	*.00	*.00	26.25	*.00			
2	UFV-1	1625.32	27.75	96.50	*.00	*.00	*.00	*.00	17.00	*.00			
1	CH-3	1581.57	38.00	95.25	*.00	*.00	*.00	*.00	53.75	*.00			
8	CARIBE	1473.21	47.00	94.75	*.00	*.00	*.00	*.00	62.25	*.00			
15	COBB	1404.45	37.50	91.25	*.00	*.00	*.00	*.00	22.50	*.00			
11	RILLITO	1279.42	28.25	62.00	*.00	*.00	*.00	*.00	26.75	*.00			
3	SJ-2	1254.42	37.50	92.00	*.00	*.00	*.00	*.00	36.25	*.00			
16	GASOY 17	1021.04	22.00	91.50	*.00	*.00	*.00	*.00	44.25	*.00			
13	WILLIAMS	762.65	21.00	94.25	*.00	*.00	*.00	*.00	24.25	*.00			
5	ORBA	712.64	31.00	87.25	*.00	*.00	*.00	*.00	39.00	*.00			
6	IAC-2	704.31	36.50	92.50	*.00	*.00	*.00	*.00	33.00	*.00			
		GRAND MEAN	1453.68	36.25	92.11	*.00	*.00	*.00	*.00	35.70	*.00		
		VARIETY MEAN	281.62	6.38	6.40	*.00	*.00	*.00	*.00	6.51	*.00		
		STANDARD ERROR OF A VARIETY MEAN	38.75%	35.22%	13.90%	*.00%	*.00%	*.00%	*.00%	36.44%	*.00%		
		COEFFICIENT OF VARIATION	802.18	18.18	*****NS	*.00	*.00	*.00	*.00	18.53	*.00		
		5% LSD VARIETY MEANS (*****NS)											

TABLE 82 EXPERIMENT 18 YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	FOD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
9	JUPITER	.00	120.75	47.43	.00	17.00	2.50	.00
14	RANSON	.00	181.50	19.18	.00	17.75	3.25	.00
4	HARDEE LS	.00	111.75	45.90	.00	14.75	3.50	.00
10	IMPROVED FELICAN	.00	196.50	32.43	.00	15.75	2.75	.00
7	TUNIA	.00	65.50	36.98	.00	19.75	3.00	.00
12	BOSSIER	.00	91.00	28.00	.00	16.75	3.50	.00
2	UFV-1	.00	127.75	28.23	.00	15.25	2.00	.00
1	CH-3	.00	138.25	38.18	.00	16.50	3.00	.00
8	CARIBE	.00	150.25	43.05	.00	12.50	4.50	.00
15	COBB	.00	206.50	18.30	.00	17.50	1.75	.00
11	RILLITO	.00	140.75	22.08	.00	17.00	3.50	.00
3	SJ-2	.00	120.00	34.98	.00	14.00	2.00	.00
16	GASOY 17	.00	169.75	19.05	.00	18.25	3.00	.00
13	WILLIAMS	.00	155.75	14.45	.00	18.75	3.75	.00
5	ORBA	.00	169.75	33.13	.00	15.75	2.00	.00
6	IAC-2	.00	63.50	34.48	.00	14.50	1.00	.00
	GRAND MEAN	.00	138.08	30.99	.00	16.36	2.81	.00
	STANDARD ERROR OF A VARIETY MEAN	.00	15.55	5.46	.00	.67	4.6	.00
	COEFFICIENT OF VARIATION	.00%	22.52%	35.22%	.00%	8.19%	32.73%	*.00%
	5% LSD VARIETY MEANS (*****=NS)	.00	44.28	15.54	.00	1.91	1.31	.00
	CORRELATIONS		(+ - PROB=.05	(+ - PROB=.01)				
	YIELD KG/Ha	.00	.12	.28+	.00	.23	.05	.00
	DAYS TO FLOWER	.00	-.30+	.22	.00	-.31+	.10	.00
	DAYS TO MATURITY	.00	-.11	.24	.00	.03	-.07	.00
	NODULE ABUND 1	.00	.00	.00	.00	.00	.00	.00
	NODULE ABUND 2	.00	.00	.00	.00	.00	.00	.00
	NODULE ACT. 1	.00	.00	.00	.00	.00	.00	.00
	NODULE ACT. 2	.00	.00	.00	.00	.00	.00	.00
	PLANT HEIGHT	.00	.03	.39+	.00	-.21	.13	.00
	LOGGING	.00	.00	.00	.00	.00	.00	.00
	SHATTER	1.00	.00	.00	.00	.00	.00	.00
	PLANTS HARVEST	.00	1.00	-.30+	.00	.12	-.00	.00
	PODS PER PLANT	.00	-.30+	1.00	.00	-.23	.11	.00
	POD HEIGHT	.00	.00	.00	1.00	.00	.00	.00
	100 SEED WEIGHT	.00	.12	-.23	.00	1.00	.01	.00
	QUALITY OF SEED	.00	-.00	.11	.00	.01	1.00	.00
	PERCENT GERM.	.00	.00	.00	.00	.00	.00	1.00

TABLE 83 EXPERIMENT 180 YEAR 1978

REGION - AFRICA
 SITE - MUFULIRA
 LATITUDE - 12 DEG. 38 MIN. S
 COOPERATOR - GLEN MELHUIJS
 DATE PLANTED - JANUARY 17, 1979
 FERTILIZER USED (KG/HA) - N 30.0, P 27.0, K 25.0
 AMOUNT OF MOISTURE - 645 MM

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LONGING	C O R R E L A T I O N S		
											++ - PROB=.05	++ - PROB=.01)	
8	DAVIS	2638.03	44.00	106.00	.00	.00	.00	.00	42.50	1.00			
5	COBB	2592.18	39.00	104.75	.00	.00	.00	.00	40.25	1.00			
7	FORREST	2588.02	39.00	99.50	.00	.00	.00	.00	47.00	1.00			
15	COLUMBUS	2563.01	32.00	99.00	.00	.00	.00	.00	46.75	1.50			
4	RANSOM	2529.67	36.00	102.00	.00	.00	.00	.00	34.25	1.25			
6	JAMES	2446.32	32.00	99.50	.00	.00	.00	.00	41.00	2.25			
14	BRAGG	2425.48	37.00	100.25	.00	.00	.00	.00	36.25	1.00			
9	GASOY 17	2404.65	36.00	98.25	.00	.00	.00	.00	36.50	1.00			
1	IMPROVED PELICAN	2342.13	43.75	103.25	.00	.00	.00	.00	56.00	1.50			
3	WILLIAMS	2333.80	32.00	93.00	.00	.00	.00	.00	32.00	1.00			
2	BOSSIER	2279.62	44.75	103.50	.00	.00	.00	.00	42.75	1.50			
16	CRAWFORD	2267.12	34.25	94.00	.00	.00	.00	.00	39.00	1.00			
10	CALLAND	2258.78	32.75	100.25	.00	.00	.00	.00	42.00	1.25			
12	CUTLER 71	2187.94	36.50	96.25	.00	.00	.00	.00	41.00	1.25			
13	MITCHELL	2037.91	33.50	93.50	.00	.00	.00	.00	39.25	1.00			
11	FRANKLIN	1612.82	32.00	97.50	.00	.00	.00	.00	38.25	1.00			
		GRAND MEAN	2344.22	36.53	99.41	.00	.00	.00	.00	41.05	1.22		
		STANDARD ERROR OF A VARIETY MEAN	142.10	1.77	1.52	.00	.00	.00	.00	3.17	.23		
		COEFFICIENT OF VARIATION	12.12%	9.467%	3.05%	.00%	.00%	.00%	.00%	15.45%	38.32%		
		5% LSD VARIETY MEANS (*****=NS)	404.75	5.03	4.32	.00	.00	.00	.00	9.03	.67		

TABLE 83 EXPERIMENT 180 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
8	DAVIS	.00	271.75	13.68	11.10	19.03	3.00	.00	41.6	20.6
5	COBB	.00	268.00	12.98	9.35	19.18	2.75	.00	41.5	20.4
7	FORREST	.00	274.25	16.00	11.65	16.45	3.25	.00	39.7	20.0
15	COLUMBUS	.00	270.00	8.05	10.35	20.35	2.25	.00	43.8	20.1
4	RANSOM	.00	272.00	12.63	10.65	20.98	3.25	.00	42.2	23.0
6	JAMES	.00	277.00	8.50	11.65	21.50	1.75	.00	42.9	20.6
14	BRAGG	.00	252.25	8.00	11.60	21.33	2.25	.00	42.8	20.3
9	GASOY 17	.00	283.25	11.90	8.45	20.38	2.25	.00	42.6	18.9
1	IMPROVED PELICAN	.00	282.25	12.48	12.40	16.28	3.50	.00	44.8	19.6
3	WILLIAMS	.00	309.50	7.63	10.50	21.38	2.25	.00	43.4	21.5
2	BOSSTIER	.00	227.50	12.38	12.15	16.73	3.00	.00	42.4	20.6
16	CRAWFORD	.00	275.75	7.43	9.20	21.58	2.25	.00	43.8	20.7
10	CALLAND	.00	242.75	4.65	11.60	22.83	1.50	.00	44.1	19.3
12	CUTLER 71	.00	255.50	7.28	11.10	22.65	2.50	.00	44.1	20.0
13	MITCHELL	.00	263.25	9.50	9.70	20.08	2.25	.00	40.5	22.5
11	FRANKLIN	.00	226.75	9.00	9.25	19.83	1.25	.00	42.9	19.6
		GRAND MEAN	*.00	265.73	10.13	10.67	20.03	2.45	.00	
		STANDARD ERROR OF A VARIETY MEAN	*.00	22.21	1.46	.69	.51	.29	.00	
		COEFFICIENT OF VARIATION	*.002	16.72%	28.78%	12.88%	5.08%	23.89%	.00%	
		5% LSD VARIETY MEANS (*****=NS)	*.00	*****	4.15	1.96	1.45	.83	.00	
		C O R R E L A T I O N S	(+ - PROB=.05				(+ - PROB=.01)			
		YIELD	KG/HA	*.00	*.08	*.40++	*.00	*.14	*.13	*.00
		DAYS TO FLOWER	*.00	-.16	*.41++	*.30+	-.56++	*.54++	*.00	
		DAYS TO MATURITY	*.00	-.23	*.37++	*.21	-.27+	*.27+	*.00	
		NODULE ABUND 1	*.00	*.00	*.00	*.00	*.00	*.00	*.00	
		NODULE ABUND 2	*.00	*.00	*.00	*.00	*.00	*.00	*.00	
		NODULE ACT. 1	*.00	*.00	*.00	*.00	*.00	*.00	*.00	
		NODULE ACT. 2	*.00	*.00	*.00	*.00	*.00	*.00	*.00	
		PLANT HEIGHT	*.00	*.04	*.30+	*.32++	-.37++	*.17	*.00	
		LODGING	*.00	*.09	-.14	*.23	-.00	-.05	*.00	
		SHATTER	1.00	*.00	*.00	*.00	*.00	*.00	*.00	
		HARVEST	1.00	-.01	*.01	-.11	*.22	*.22	*.00	
		PLANTS PER PLANT	*.00	-.01	1.00	*.09	-.41++	*.42++	*.00	
		POD HEIGHT	*.00	*.01	*.09	1.00	-.18	*.36++	*.00	
		100 SEED WEIGHT	*.00	-.11	-.41++	-.18	1.00	-.46++	*.00	
		QUALITY OF SEED	*.00	*.22	*.42++	*.36++	-.46++	1.00	*.00	
		PERCENT GERM.	*.00	*.00	*.00	*.00	*.00	*.00	1.00	

TABLE 84 EXPERIMENT 181

YEAR 1978

REGION - AFRICA
 SITE - LUSAKA
 LATITUDE - 15 DEG. 24 MIN. S
 COOPERATORS - C.R. NISSLY AND F. JAHAYER
 DATE PLANTED - JANUARY 5, 1979
 SOIL TYPE - SAND 29.5%, SILT 56%, CLAY 14.5%, pH 5.5
 FERTILIZER USED (KG/HA) - N 30.0, P 27.0, K 25.0
 AMOUNT OF MOISTURE - 296 MM
 NUMBER OF IRRIGATIONS - 2
 COUNTRY - ZAMBIA
 ELEVATION - 1154 M
 LONGITUDE - 28 DEG. 19 MIN. E
 DATE HARVESTED - APRIL, 1979

TABLE 84

EXPERIMENT 181

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
4	RANSOM	2.00	254.50	25.25	8.00	19.65	2.00	.00	42.8
16	CRAWFORD	2.50	239.50	28.00	9.75	19.35	1.25	.00	42.2
15	COLUMBUS	2.50	303.25	35.75	12.00	17.50	1.00	.00	44.1
13	MITCHELL	4.75	262.75	33.00	10.25	17.53	1.25	.00	40.4
10	CALLAND	4.00	303.75	30.00	11.25	21.83	2.25	.00	43.4
8	DAVIS	1.75	317.25	33.50	10.00	17.63	1.50	.00	43.5
12	CUTLER 71	3.25	295.50	30.50	12.50	19.55	1.25	.00	43.0
9	GASOY 17	2.25	273.25	35.50	9.25	16.68	1.75	.00	40.8
5	COBB	2.75	317.25	37.00	9.25	16.35	1.25	.00	42.1
6	JAMES	3.50	310.50	24.25	13.00	18.35	2.00	.00	42.2
14	BRAGG	1.75	288.25	26.00	12.75	18.23	1.50	.00	41.6
2	BOSSIER	1.50	211.25	30.25	13.00	16.40	1.50	.00	54.2
11	FRANKLIN	4.75	322.25	23.00	11.25	18.10	1.75	.00	41.7
3	WILLIAMS	2.50	303.25	26.75	10.50	19.28	1.75	.00	43.4
7	FORREST	1.75	271.50	38.00	11.75	13.70	1.75	.00	41.4
1	IMPROVED PELICAN	1.00	290.25	36.50	16.50	12.78	1.00	.00	44.0
	GRAND MEAN	2.66	285.27	30.83	11.31	17.68	1.55	.00	
	VARIETY MEAN	.00	169.66	18.45	.00	.00	.00	.00	
	COEFFICIENT OF VARIATION	.00%	118.95%	119.67%	.00%	.00%	.00%	.00%	
	5% LSD VARIETY MEANS (*****=NS)	.00	*****	*****	.00	.00	.00	.00	
	CORRELATIONS (+ - PROB=.05 + - PROB=.01)								
	YIELD KG/HA	.07	-.07	-.18	-.43++	.53++	*.10	.00	
	DAYS TO FLOWER	-.64++	-.20	.34++	-.25+	-.58++	-.23	.00	
	DAYS TO MATURITY	-.49++	.02	.33++	-.06	-.36++	*.15	.00	
	NODULE ABUND 1	.00	.00	.00	.00	.00	.00	.00	
	NODULE ABUND 2	-.21	.12	.44++	*.15	-.46++	-.37++	.00	
	NODULE ACT. 1	.00	.00	.00	.00	.00	.00	.00	
	NODULE ACT. 2	-.57++	-.25+	.19	-.11	-.30+	*.03	.00	
	PLANT HEIGHT	-.47++	-.11	.32++	.49++	-.54++	-.27+	.00	
	LOUNGING	.00	.00	.00	.00	.00	.00	.00	
	SHATTER	1.00	.22	-.22	-.18	.35++	*.12	.00	
	PLANTS HARVEST	.22	1.00	-.11	.03	.12	-.12	.00	
	PODS PER PLANT	-.22	-.11	1.00	.02	-.50++	-.22	.00	
	POD HEIGHT	-.18	.03	.02	1.00	-.35++	-.23	.00	
	100 SEED WEIGHT	*.35++	.12	-.50++	-.35++	1.00	*.27+	.00	
	QUALITY OF SEED	.12	-.12	-.22	-.23	*.29+	*.00		
	PERCENT GERM.	.00	.00	.00	.00	.00	1.00		

TABLE 85 EXPERIMENT 182 YEAR 1978

REGION - AFRICA	COUNTRY - ZAMBIA
SITE - MAGOYE	ELEVATION - 1067 M
LATITUDE - 16 DEG. 1 MIN. S	LONGITUDE - 27 DEG. 37 MIN. E
COOPERATOR - F.	
DATE PLANTED - JANUARY 8, 1979	DATE HARVESTED - APRIL, 1979
FERTILIZER USED (KG/HA) - N 30.0, P 27.0, K 25.0	
AMOUNT OF MOISTURE - 31.6 MM	

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/H.A.	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND. 1	NODULE ABUND. 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
7	FORREST	2586.35	32.00	89.25	.00	.00	.00	.00	42.75	1.00
2	BOSSIER	2541.76	40.00	93.25	.00	.00	.00	.00	56.25	2.00
5	COBB	2534.26	32.00	88.00	.00	.00	.00	.00	46.75	1.00
8	DAVIS	2525.09	37.00	91.75	.00	.00	.00	.00	49.50	1.25
13	MICHELL	2454.66	25.00	90.25	.00	.00	.00	.00	48.00	2.00
4	RANSOM	2447.99	29.00	83.00	.00	.00	.00	.00	29.50	1.00
6	JAMES	2388.39	26.00	80.00	.00	.00	.00	.00	45.50	1.00
16	CRAWFORD	2357.14	25.00	82.25	.00	.00	.00	.00	44.25	1.50
15	COLUMBUS	2309.63	25.00	81.50	.00	.00	.00	.00	43.50	1.00
12	CUTLER 71	2301.71	25.00	79.25	.00	.00	.00	.00	50.00	1.25
14	BRAGG	2234.20	29.00	83.00	.00	.00	.00	.00	37.90	1.50
9	GASOY 17	2221.28	26.00	83.00	.00	.00	.00	.00	29.75	1.00
3	WILLIAMS	2166.27	25.00	79.00	.00	.00	.00	.00	40.00	1.00
11	FRANKLIN	2091.67	25.00	79.00	.00	.00	.00	.00	41.75	1.25
10	CALLAND	1983.73	25.00	79.25	.00	.00	.00	.00	41.75	1.50
1	IMPROVED PELICAN	1943.72	48.00	97.00	.00	.00	.00	.00	81.00	1.75
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
CORRELATIONS (+ = PROB=.05 -+ = PROB=.01)										
YIELD KG/H.A.										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE ABUND. 1										
NODULE ABUND. 2										
NODULE ACT. 1										
NODULE ACT. 2										
PLANT HEIGHT										
LOGGING										
SHATTER										
PLANTS HARVEST										
PODS PER PLANT										
POD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										

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TABLE 85 EXPERIMENT 182

YEAR 1973 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
7	FORREST	1.00	205,25	27,25	11,25	17,75	1,00	.00	41,3	19,5
2	BOSSIER	1.00	227,50	22,50	13,25	18,50	1,00	.00	43,0	18,6
5	COBB	1.00	240,25	24,00	9,50	19,00	1,00	.00	39,8	20,5
6	DAVIS	1.00	255,50	24,00	9,50	19,00	1,00	.00	42,2	19,9
13	MITCHELL	1.00	209,75	22,00	9,25	19,50	1,00	.00	38,6	22,1
4	RANSOM	1.00	201,75	20,50	7,00	21,50	1,25	.00	41,3	21,7
6	JAMES	1.00	282,00	16,00	9,50	20,75	1,00	.00	40,9	21,8
16	CRAWFORD	1.00	172,25	27,00	6,25	20,25	1,00	.00	41,4	20,7
15	COLUMBUS	1.00	247,50	23,75	7,00	19,50	1,00	.00	42,7	20,6
12	CUTLER 71	1.00	267,50	22,75	8,25	22,25	1,00	.00	42,1	20,8
14	BRAGG	1.00	209,00	20,50	8,50	22,00	1,00	.00	41,1	20,6
9	GASOY 17	1.00	263,75	17,75	7,00	20,25	1,00	.00	40,2	19,4
3	WILLIAMS	1.00	291,00	18,00	8,75	20,25	1,00	.00	39,2	21,6
11	FRANKLIN	1.00	254,75	17,75	6,75	19,75	1,75	.00	39,8	19,9
10	CALLAND	1.00	267,75	16,75	9,75	21,00	1,25	.00	41,3	19,2
1	IMPROVED PELICAN	1.00	270,75	26,50	13,75	15,00	1,00	.00	43,4	19,4
			GRAND MEAN	241,64	21,69	9,03	19,77	1,08	.00	
			STANDARD ERROR OF A VARIETY MEAN	17,54	1,23	.76	.62	.11	.00	
			COEFFICIENT OF VARIATION	14,52%	11,73%	16,69%	6,27%	19,3%	.00%	
			5% LSD VARIETY MEANS (*****NS)	49,97	3,64	2,16	1,76	.31		
			CORRELATIONS (4 = FROB=.05		44 = PROB=.01)					
			YIELD	.00	*.13	*.17	*.09	*.10	*.01	*.00
			KG/HA	.00	*.03	*.384+	*.674+	*.664+	*.17	
			DAYS TO FLOWER	.00	-.10	*.504+	*.604+	*.664+	-.22	
			DAYS TO MATURITY	.00	*.00	*.00	*.00	*.00	*.00	
			NODEL ABUND 1	.00	*.00	*.00	*.00	*.00	*.00	
			NODEL ABUND 2	.00	*.00	*.00	*.00	*.00	*.00	
			NODEL ACT. 1	.00	*.00	*.00	*.00	*.00	*.00	
			NODEL ACT. 2	.00	*.00	*.00	*.00	*.00	*.00	
			PLANT HEIGHT	.00	*.17	*.394+	*.554+	*.544+	-.15	
			LONGING	.00	-.06	*.05	*.394+	*.334+	*.07	
			SHATTER	1.00	*.00	*.00	*.00	*.00	*.00	
			PLANTS HARVEST	.00	1,00	*.544+	*.254	*.06	*.05	
			PODS PER PLANT	.00	...*.544+	1,00	.04	-.34+	-.22	
			POD HEIGHT	.00	*.254+	*.04	1,00	*.494+	*.15	
			100 SEED WEIGHT	.00	...*.06	...*.314+	...*.424+	1,00	*.02	
			QUALITY OF SEED	.00	*.05	...*.22	...*.15	*.09	1,00	
			GERM.	.00	*.00	*.00	*.00	*.00	1,00	

TABLE 86 EXPERIMENT 178 YEAR 1978

REGION - AFRICA
 SITE - SALISBURY
 LATITUDE - 17 DEG. 48 MIN. S
 COOPERATORS - J. R. TATTERSFIELD, J. S. TICHAWA
 PLANTED - DECEMBER 8, 1978
 SOIL TYPE - SAND 30%, SILT 20%, CLAY 50%, PH 5.4
 FERTILIZER USED (KG/HA) - N 32.0, P 24.6, K 33.2
 AMOUNT OF MOISTURE - 598 MM
 NUMBER OF IRRIGATIONS - 5 (165 MM)
 LOCAL VARIETIES - ORABI, IMPALA

TABLE 86

EXPERIMENT 178 YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	FOD PER PLANT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
14	IMPALA	1.00	200.00	32.03	10.00	22.78	3.00	93.75
5	ORIBI	1.00	200.00	29.50	11.25	22.25	2.50	90.25
9	GASOY 17	1.25	200.00	32.20	2.50	20.03	2.00	96.00
7	FORREST	1.00	200.00	37.03	5.00	19.00	3.00	93.75
4	RANSOM	1.00	200.00	27.05	5.00	21.25	3.00	91.00
13	MICHELL	1.00	200.00	24.38	.00	20.35	3.00	94.50
2	BOSSIER	1.25	200.00	39.68	6.25	18.58	3.50	84.50
8	DAVIS	1.25	200.00	38.18	6.25	19.53	2.00	90.75
15	COLUMBUS	1.25	200.00	24.75	.00	20.35	3.00	96.00
16	CRAWFORD	1.00	200.00	22.23	.00	21.88	2.75	97.00
12	CUTLER 71	1.00	200.00	21.18	.00	23.23	3.00	90.00
10	CALLAND	1.75	200.00	21.30	.00	24.20	3.50	91.75
6	JAMES	1.50	200.00	20.78	2.50	22.23	3.00	95.25
3	WILLIAMS	1.00	200.00	17.93	.00	21.43	3.00	91.00
11	FRANKLIN	1.00	200.00	21.50	.00	20.25	3.00	95.25
1	IMPROVED FELICAN	2.00	200.00	59.55	10.00	14.78	3.00	88.00
GRAND MEAN								
	STANDARD ERROR OF A VARIETY MEAN	.16	.00	1.64	.87	.39	.14	1.73
	COEFFICIENT OF VARIATION	26.51%	.00%	11.15%	47.40%	3.79%	.412	3.75%
	5% LSD VARIETY MEANS (*****NS=NS)	.45	.00	4.66	2.48	1.12	.39	4.93
CORRELATIONS (+ - PROB=.01)								
	YIELD	KG/HA	-.294	.00	.08	.384+	.19	-.304
	DAYS TO FLOWER		.294	.00	.924+	.794+	.694+	-.364+
	DAYS TO MATURITY		.384+	.00	.864+	.724+	.614+	-.384+
	NODULE ABUND 1		.09	.00	.08	-.06	-.304+	-.02
	NODULE ABUND 2		-.00	.00	.404+	.494+	-.304+	-.10
	NODULE ACT. 1		.13	.00	-.02	-.04	.21	.02
	NODULE ACT. 2		.324+	.00	.20	.05	-.03	.23
	PLANT HEIGHT		.294	.00	.894+	.764+	.644+	-.13
	LOUDING		.284	.00	.794+	.484+	.684+	.544+
	SHATTER		1.00	.00	.354+	.02	-.314+	.18
	PLANTS HARVEST		.00	1.00	.00	.00	.00	.00
	PLANTS PER PLANT		.354+	.00	1.00	.664+	.764+	-.10
	FOD HEIGHT		.02	.00	.664+	.664+	.314+	.19
	100 SEED WEIGHT		-.314	.00	-.764+	-.314	1.00	.08
	QUALITY OF SEED		.12	.00	-.10	-.19	.08	1.00
	PERCENT GERM.		-.18	.00	-.374+	-.354+	.21	-.18

TABLE 87

EXPERIMENT 150

YEAR 1978

REGION - ASIA
 SITE - JOYDEBFUR
 LATITUDE - 24 DEG. N
 LONGITUDE - 8 M
 COOPERATORS - ABDUS SOBHAN, M.Z. HORQE, P.R. HOBBS
 DATE PLANTED - DECEMBER 13, 1978
 DATE HARVESTED - MARCH, 1979
 SOIL TYPE - SAND 15%, SILT 24%, CLAY 61%, PH 5.2
 FERTILIZER USED (KG/HA) - N 25.0, P 25.0, K 25.0
 AMOUNT OF MOISTURE - 262.2 MM
 NUMBER OF IRRIGATIONS - 7 (177.8 MM)

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
7	JAMES	1180.65	36.00	106.00	1.75	2.25	71.25	71.25	37.70	1.00
11	CALLAND	1105.22	32.00	98.00	1.50	2.00	70.00	78.75	34.20	1.00
14	MITCHELL	1076.05	33.00	99.00	1.00	1.25	58.75	70.00	35.60	1.50
13	CUTLER 71	1061.46	32.25	99.00	1.00	1.25	62.50	56.25	35.38	1.25
4	WILLIAMS	1033.96	31.00	98.00	1.50	1.75	78.75	71.25	31.65	1.25
15	BRAGG	1020.20	33.00	96.00	1.50	1.25	56.25	60.00	34.60	1.00
3	BOSSIER	973.11	24.00	107.00	1.25	1.25	62.50	66.25	46.58	1.00
6	COBB	906.85	40.00	98.00	1.50	1.25	66.25	61.25	37.28	1.00
5	RANSOM	904.35	33.00	99.00	1.50	1.25	72.50	63.75	23.53	1.00
9	DAVIS	866.01	58.50	120.00	1.50	1.25	66.25	58.75	43.68	1.00
16	CRAWFORD	827.25	36.00	100.00	1.50	1.50	68.75	72.50	37.68	1.00
10	GRASOY 17	804.33	32.50	103.00	1.75	1.50	66.25	67.50	32.25	1.00
12	FRANKLIN	715.98	32.00	98.00	1.00	1.25	70.00	62.50	30.70	1.00
2	RILLITO	670.97	32.00	99.25	1.25	2.00	72.50	80.00	27.25	1.50
1	IMPROVED PELICAN	608.87	66.25	112.75	1.25	1.75	75.00	66.25	48.85	1.00
8	FORREST	349.24	54.75	113.50	1.25	1.75	66.25	62.50	47.78	1.25
GRAND MEAN										
		881.53	37.89	102.91	1.38	1.53	67.73	66.80	36.54	1.11
		56.24	.18	.18	.25	.34	7.66	6.07	2.06	.15
		12.76%	.94%	.35%	36.16%	44.55%	22.60%	18.18%	11.26%	27.55%
		160.19	.51	.52	*****	*****	*****	*****	5.86	*****

CORRELATIONS (+ - PROB=.05 + - PROB=.01)										
YIELD KG/HA	1.00	-*.51++	-.39++	.08	.02	.02	-.13	*.17	-.19	-.15
DAYS TO FLOWER	-.51++	1.00	.78++	.00	.05	.05	-.16	*.55++	-.07	-.07
DAYS TO MATURITY	-.39++	.78++	1.00	.04	.04	.04	-.14	*.66++	-.10	-.06
NODULE ABUND 1	.08	.00	.04	1.00	.01	-.00	-.25+	-.12	-.13	-.13
NODULE ABUND 2	.02	.05	.05	.01	1.00	.16	*.14	*.03	-.13	-.14
NODULE ACT. 1	-.13	.07	.04	-.00	.16	1.00	*.24	-.13	-.06	-.01
NODULE ACT. 2	-.17	-.16	-.14	-.25+	.14	.24	*.00	-.06	-.12	-.12
PLANT HEIGHT	-.19	.55++	.66++	-.12	.03	-.13	-.06	*.12	1.00	1.00
LODGING	-.15	-.07	-.10	-.06	-.13	-.14	-.01	-.12	-.07	-.07
SHATTER	-.06	.20	.53++	-.11	-.02	-.03	-.09	*.55++	-.14	-.22
PLANTS HARVEST	.13	.10	.18	-.00	-.09	-.10	-.24	*.11	-.15	-.15
PODS PER PLANT	-.01	-.08	.04	-.20	-.02	*.01	*.25+	*.19	-.06	-.05
POD HEIGHT	-.25+	.40++	.33++	-.05	.30+	-.06	*.10	*.20	-.07	-.07
100 SEED WEIGHT	.17	-.35++	-.38++	.14	-.03	-.01	-.04	-.22	-.03	-.02
QUALITY OF SEED PERCENT GERM.	-.15	.19	.37++	-.07	-.04	-.00	-.10	*.36++	-.02	-.02
	-.11	-.32++	-.33++	.03	-.06	-.05	-.05	-.19	-.20	-.20

TABLE 87

EXPERIMENT 150 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
7	JAMES	1.00	211.25	12.25	4.63	14.30	1.25	70.00
11	CALLAND	1.00	225.50	11.75	4.38	13.33	1.25	92.50
14	MITCHELL	1.00	200.25	14.25	4.15	13.40	1.25	77.50
13	CUTLER 71	1.00	213.50	12.75	4.38	13.20	1.00	82.50
4	WILLIAMS	1.00	209.00	11.75	4.30	13.48	1.50	82.50
15	BRAGG	1.00	216.00	9.50	5.03	14.00	1.50	76.25
3	BOSSIER	3.00	226.25	19.00	4.13	13.13	2.50	83.75
6	CORB	1.00	228.00	14.25	3.73	14.00	1.25	88.75
5	RANSOM	1.00	241.25	12.00	4.48	13.10	1.25	77.50
9	DAVIS	2.00	224.00	11.00	4.60	13.10	1.75	72.50
16	CRAWFORD	1.00	171.25	14.00	4.63	14.10	1.50	87.50
10	GASOY 17	1.00	225.00	11.00	4.58	14.15	1.50	91.25
12	FRANKLIN	1.00	188.50	11.25	4.08	14.50	1.25	87.50
2	RILLITO	1.00	178.75	18.50	4.70	13.23	1.00	92.50
1	IMPROVED PELICAN	2.00	213.00	15.50	4.95	12.80	2.00	72.50
8	FORREST	1.00	220.00	11.50	4.83	13.13	1.75	85.00
	GRAND MEAN	1.25	211.97	13.14	4.47	13.55	1.47	82.50
	STANDARD ERROR OF A VARIETY MEAN	*1.14	9.69	1.60	.09	.13	.29	3.42
	COEFFICIENT OF VARIATION	22.71%	9.14%	24.30%	4.06%	1.88%	38.90%	8.30%
	5% LSD VARIETY MEANS (*****-NS)	.40	27.60	4.55	.26	.36	*****	9.75
	CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)							
	YIELD	-.06	.13	-.01	-.25+	.17	-.15	-.11
	DAYS TO FLOWER	-.20	.10	-.08	.40++	-.35++	.19	-.32++
	DAYS TO MATURITY	*.53++	.18	.04	.33++	-.38++	.37++	-.33++
	NUDULE ABUND 1	-.11	-.00	-.20	.05	.14	-.07	.03
	NUDULE ABUND 2	-.02	-.09	-.02	.30+	-.03	-.04	-.06
	NUDULE ACT. 1	-.03	-.10	.01	-.06	-.01	-.00	-.06
	NUDULE ACT. 2	-.09	-.24	.25+	.10	-.04	-.10	.05
	PLANT HEIGHT	*.55++	.11	.19	.20	-.22	.36++	-.19
	PLANT LODGING	-.14	-.22	.15	-.03	-.07	-.02	.20
	SHATTER	1.00	.25+	.26+	-.03	-.37++	.44++	.25+
	PLANTS HARVEST	.25+	1.00	-.16	-.11	-.22	.11	-.11
	PODS PER PLANT	*.26+	-.16	1.00	-.11	-.22	.19	.25+
	POD HEIGHT	-.03	-.11	-.11	1.00	-.18	.08	-.21
	100 SEED WEIGHT	-.37++	-.22	-.22	-.18	1.00	-.17	.16
	QUALITY OF SEED	*.44++	.11	.19	.08	-.17	1.00	-.09
	PERCENT GERM.	*.25+	-.11	.25+	-.21	.16	-.09	1.00

TABLE 88 EXPERIMENT 141 YEAR 1978

REGION - ASIA
 SITE - MYMENSINGH
 LATITUDE - 24 DEG. 7 MIN. N
 COOPERATORS - DR. A.J. MIAH, JAFAR AHMED, B.H. SIKDER
 DATE PLANTED - AUGUST 29, 1978
 SOIL TYPE - SAND 10.0%, SILT 65.6%, CLAY 24.4%
 FERTILIZER USED (KG/HA) - N 25.0, P 25.0, K 25.0
 SUBSTITUTE VARIETY - LEE-74

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING	CORRELATIONS (+ - PROB=.05 + - PROB=.01)	
											LEAF	STEM
1	IMPROVED PELICAN	2605.94	33.75	98.25	14.50	21.00	90.00	98.75	62.20	3.00		
3	BOSSTER	2604.69	30.00	106.00	23.00	24.25	80.00	88.75	43.93	1.00		
15	BRAGG	2573.43	28.00	96.00	17.75	24.00	92.50	97.50	30.23	1.00		
2	RILLITO	2508.83	28.75	96.00	20.00	27.50	98.75	100.00	37.60	2.00		
7	JAMES	1958.72	27.25	93.00	16.00	17.00	87.50	95.00	37.45	1.00		
5	RANSOM	1906.63	28.50	100.50	21.75	27.25	93.25	98.75	24.63	1.00		
14	MITCHELL	1819.11	26.50	90.00	16.00	17.25	97.50	100.00	35.10	1.00		
6	LEE-74	1819.11	27.00	92.00	22.75	19.50	97.50	100.00	29.13	1.00		
11	CALLAND	1654.50	25.00	91.00	15.75	18.50	96.25	98.75	33.20	1.00		
10	GASOY 17	1641.99	27.50	95.25	13.00	20.75	93.75	97.50	24.10	1.00		
9	DAVIS	1635.74	31.00	96.00	15.75	18.25	95.00	97.50	23.78	1.00		
8	FORREST	1583.65	28.50	92.00	14.50	20.00	92.50	97.50	26.50	1.00		
4	WILLIAMS	1556.56	26.50	88.00	24.25	26.00	91.25	96.25	33.10	1.00		
13	CUTLER 71	1454.46	26.00	87.75	18.75	19.00	97.50	100.00	32.08	1.00		
12	FRANKLIN	1362.77	25.25	85.00	16.50	12.00	90.00	96.25	26.73	1.00		
16	CRAWFORD	1277.34	26.50	90.25	20.50	22.50	92.50	97.50	27.33	1.00		
		GRAND MEAN	1872.72	27.88	93.56	18.17	20.92	92.89	97.50	32.94	1.19	
		STANDARD ERROR OF A VARIETY MEAN	192.81	*.59	*.33	1.49	2.73	4.66	3.07	1.96	.00	
		COEFFICIENT OF VARIATION	20.59%	4.20%	*.71%	16.38%	26.12%	10.02%	6.30%	11.89%	.00%	
		5% LSD VARIETY MEANS (*****NS)	549.22	1.67	.95	4.24	7.78	*****	*****	5.58	.00	
C O R R E L A T I O N S												
YIELD KG/HA	1.00	*.41++	*.59++	*.04	*.07	*.07	*.10	*.14	*.15	*.54++	*.44++	
DAYS TO FLOWER	*.41++	1.00	*.65++	*.65++	*.11	*.11	*.32++	*.23	*.21	*.44++	*.62++	
DAYS TO MATURITY	*.59++	*.65++	1.00	*.07	*.11	*.10	*.10	*.05	*.04	*.27+		
NODULE ABUND 1	*.04	*.07	*.10	*.32++	*.10	*.10	*.10	*.11	*.06	*.09	*.12	
NODULE ABUND 2	*.07	*.10	*.10	*.32++	*.23	*.05	*.11	*.00	*.02	*.13		
NODULE ACT. 1	*.11	*.14	*.14	*.23	*.23	*.05	*.11	*.00	*.00	*.23	*.00	
NODULE ACT. 2	*.15	*.01	*.21	*.04	*.21	*.04	*.06	*.88++	*.00	*.17	*.10	
PLANT HEIGHT	*.54++	*.44++	*.32+	*.09	*.02	*.02	*.23	*.17	*.17	1.00	*.76++	
LODGING	*.44++	*.62++	*.27+	*.12	*.13	*.00	*.00	*.00	*.10	*.76++	1.00	
SHATTER	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	
PLANTS HARVEST	*.43++	*.09	*.12	*.01	*.01	*.09	*.03	*.03	*.03	*.28+	*.13	
PODS PER PLANT	*.62++	*.61++	*.63++	*.01	*.17	*.15	*.12	*.12	*.12	*.57++	*.54++	
HEIGHT	*.16	*.22	*.02	*.13	*.14	*.18	*.12	*.12	*.12	*.58++	*.43++	
WEIGHT	*.07	*.07	*.02	*.05	*.01	*.05	*.02	*.05	*.02	*.18	*.07	
QUALITY OF SEED	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	
PERCENT GERM.	*.19	*.24	*.22	*.23	*.19	*.19	*.10	*.10	*.10	*.29+	*.33++	

TABLE 88

EXPERIMENT 141 YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
1	IMPROVED PELICAN	1.00	266.00	33.25	11.88	15.40	2.00	98.50	45.0	21.7
3	BOSSIER	1.00	210.25	34.25	6.68	15.38	2.00	97.25	45.3	21.4
15	BRAGG	1.00	261.75	24.25	6.38	14.65	2.00	93.50	43.1	23.2
2	RILLITO	1.00	198.75	30.50	5.30	13.20	2.00	92.50	43.5	22.8
7	JAMES	1.00	253.00	17.00	6.85	15.18	2.00	85.50	42.4	23.9
5	RANSOM	1.00	246.00	14.75	6.05	15.88	2.00	92.75	43.4	24.6
14	MITCHELL	1.00	222.75	17.00	7.65	15.48	2.00	84.50	41.3	24.3
6	LEE-74	1.00	249.75	22.50	5.88	13.38	2.00	97.50	45.0	22.8
11	CALLAND	1.00	257.00	15.25	6.50	15.15	2.00	91.00	42.9	21.6
10	GASOY 17	1.00	237.50	22.25	5.43	14.95	2.00	92.00	42.0	22.4
9	DAVIS	1.00	228.75	20.00	7.08	14.38	2.00	86.75	43.6	22.7
8	FORREST	1.00	198.50	26.25	5.65	13.28	2.00	95.50	42.5	23.0
4	WILLIAMS	1.00	246.50	16.75	7.43	15.05	2.00	95.50	43.5	23.7
13	CUTLER 71	1.00	229.50	14.00	8.95	17.33	2.00	92.50	43.3	22.7
12	FRANKLIN	1.00	200.00	12.25	7.15	14.23	2.00	94.50	41.9	23.8
16	CRAWFORD	1.00	113.50	16.75	5.73	14.90	2.00	89.25	44.2	22.8
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
52 LSD VARIETY MEANS (*****=NS)										
CORRELATIONS										
(+ - PROB=.05)										
CORRELATIONS										
(+ - PROB=.05)										
YIELD KG/HA										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE ABUND 1										
NODULE ABUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
FLANT HEIGHT										
LODGING										
SHATTER										
PLANTS HARVEST										
PODS PER PLANT										
POD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										

TABLE 89 EXPERIMENT 170 YEAR 1978

REGION - ASIA
 SITE - SHANHUA
 LATITUDE - 23 DEG. 7 MIN. N
 COOPERATOR - S. SHANMUGASUNDARAM
 DATE PLANTED - JULY 12, 1978
 FERTILIZER USED (KG/HA) - N 40.0, P 44.0, K 99.6
 AMOUNT OF MOISTURE - 868 MM
 LOCAL VARIETIES - SHIH SHIH, TAINUNG NO. 4

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1		NODULE ABUND 2		NODULE ACT. 1		NODULE ACT. 2		PLANT HEIGHT	LODGING
					ABUND	ACT.	ABUND	ACT.	ABUND	ACT.	ABUND	ACT.		
9	DAVIS	2479.50	32.50	100.50	.00	.00	.00	.00	.00	.00	.00	.00	52.45	1.50
15	TAINUNG #4	2468.00	32.50	94.50	.00	.00	.00	.00	.00	.00	.00	.00	50.80	2.50
4	WILLIAMS	2426.50	22.50	85.00	.00	.00	.00	.00	.00	.00	.00	.00	69.18	1.75
5	RANSOM	2422.50	29.00	94.50	.00	.00	.00	.00	.00	.00	.00	.00	50.78	1.50
12	FRANKLIN	2390.00	22.75	84.50	.00	.00	.00	.00	.00	.00	.00	.00	63.75	2.75
3	BOSSIER	2320.50	39.00	103.50	.00	.00	.00	.00	.00	.00	.00	.00	59.95	2.00
7	JAMES	2276.00	24.75	94.00	.00	.00	.00	.00	.00	.00	.00	.00	69.75	1.50
1	IMPROVED PELICAN	2232.00	42.00	103.50	.00	.00	.00	.00	.00	.00	.00	.00	95.20	2.00
6	SHIH SHIH	2178.00	26.50	86.75	.00	.00	.00	.00	.00	.00	.00	.00	40.45	1.75
10	GASOY 17	2087.50	28.00	96.25	.00	.00	.00	.00	.00	.00	.00	.00	44.50	1.25
2	RILLITO	2057.50	32.00	96.50	.00	.00	.00	.00	.00	.00	.00	.00	69.05	1.25
8	FORREST	1762.50	29.25	92.25	.00	.00	.00	.00	.00	.00	.00	.00	43.83	1.50
11	CALLAND	1729.50	22.25	86.50	.00	.00	.00	.00	.00	.00	.00	.00	61.95	1.50
14	MITCHELL	1703.00	23.75	86.50	.00	.00	.00	.00	.00	.00	.00	.00	55.08	1.75
16	CRAWFORD	1545.00	24.25	86.75	.00	.00	.00	.00	.00	.00	.00	.00	48.33	2.00
13	CUTLER 71	1505.50	22.75	85.50	.00	.00	.00	.00	.00	.00	.00	.00	55.53	2.00
GRAND MEAN				2098.97	28.36	92.31	.00	.00	.00	.00	.00	.00	58.16	1.78
STANDARD ERROR OF A VARIETY MEAN				328.21	.43	1.15	.00	.00	.00	.00	.00	.00	5.62	.35
COEFFICIENT OF VARIATION				31.27%	3.02%	2.50%	.00%	.00%	.00%	.00%	.00%	.00%	19.33%	38.75%
5% LSD VARIETY MEANS (*****NS)				*****NS	1.22	3.29	.00	.00	.00	.00	.00	.00	16.01	*****NS
CORRELATIONS (+ = PROB=.05 ++ = PROB=.01)														
YIELD	KG/HA	1.00	*.16	.16	.00	.00	.00	.00	.00	.00	.00	.00	*41++	*29+
DAYS TO FLOWER		.16	1.00	*.88++	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.26+	-.01
DAYS TO MATURITY			*.18	*.88++	1.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.19	-.20
NODULE ABUND 1				*.00	*.00	1.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00
NODULE ABUND 2				*.00	*.00	*.00	1.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00
NODULE ACT. 1				*.00	*.00	*.00	*.00	1.00	*.00	*.00	*.00	*.00	*.00	*.00
NODULE ACT. 2				*.00	*.00	*.00	*.00	*.00	1.00	*.00	*.00	*.00	*.00	*.00
PLANT HEIGHT				*.41++	*.26+	*.19	*.00	*.00	*.00	*.00	*.00	*.00	*.24	*.00
LODGING				*.29+	-.01	-.20	*.00	*.00	*.00	*.00	*.00	*.00	*.24	1.00
SHATTER				*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00
PLANTS HARVEST				*.43++	-.41++	-.33++	*.00	*.00	*.00	*.00	*.00	*.00	*.45++	*.17
PODS PER PLANT				*.18	*.76++	*.76++	*.00	*.00	*.00	*.00	*.00	*.00	*.03	-.14
POD HEIGHT				*.36++	*.48++	*.43++	*.00	*.00	*.00	*.00	*.00	*.00	*.56++	*.17
100 SEED WEIGHT				-.05	-.76++	-.70++	*.00	*.00	*.00	*.00	*.00	*.00	-.10	*.09
QUALITY OF SEED				-.25+	-.62++	-.65++	*.00	*.00	*.00	*.00	*.00	*.00	*.14	*.17
PERCENT GERM.				-.02	*.24	*.28+	*.00	*.00	*.00	*.00	*.00	*.00	*.17	-.21

TABLE 89 EXPERIMENT 170 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
9	DAVIS	1.00	138.00	49.68	12.95	15.60	1.75	47.75
15	TAINUNG #4	1.00	65.00	60.20	13.48	16.75	2.25	57.75
4	WILLIAMS	1.00	163.50	23.15	13.40	18.33	3.50	70.25
5	RANSOM	1.00	122.50	38.28	13.20	15.45	2.00	85.00
12	FRANKLIN	1.00	209.00	20.43	12.78	16.98	3.75	45.25
3	BOSSIER	1.00	110.50	50.13	14.00	13.70	2.00	63.50
7	JAMES	1.00	186.75	28.75	13.55	16.48	2.75	82.75
1	IMPROVED FELICAN	1.00	124.25	57.60	15.00	11.25	2.00	97.50
6	SHIH SHIH	1.00	121.25	35.48	11.60	15.15	2.00	68.75
10	GASOY 17	1.00	126.50	44.28	12.63	14.13	1.75	84.75
2	RILLITO	1.00	119.25	56.05	12.88	13.43	2.50	91.00
8	FORREST	1.00	119.00	43.35	13.10	12.55	2.00	62.75
11	CALLAND	1.00	186.50	17.23	12.68	18.70	4.50	44.25
14	MITCHELL	1.00	110.75	30.85	12.08	16.80	3.75	50.50
16	CRAWFORD	1.00	92.25	29.03	12.18	16.35	2.75	68.25
13	CUTLER 71	1.00	156.25	18.30	12.33	18.55	4.00	60.75
GRAND MEAN								
STANDARD ERROR OF A VARIETY MEAN								
COEFFICIENT OF VARIATION								
5% LSD VARIETY MEANS (*****NS)								
CORRELATIONS (+ - PROB=.05 + - PROB=.01)								
YIELD KG/HA								
DAYS TO FLOWER								
DAYS TO MATURITY								
NODULE ABUND 1								
NODULE ABUND 2								
NODULE ACT. 1								
NODULE ACT. 2								
PLANT HEIGHT								
LOGGING								
SHATTER								
PLANTS HARVEST								
PODS PER PLANT								
POD HEIGHT								
100 SEED WEIGHT								
QUALITY OF SEED								
PERCENT GERM.								

TABLE 90 EXPERIMENT 436 YEAR 1978

REGION - ASIA
 SITE - HISSAR
 LATITUDE - 29 DEG. 10 MIN. N
 COOPERATOR - DR. B.D. CHAUDHARY
 DATE PLANTED - JULY 7, 1978
 FERTILIZER USED (KG/HA) - N 20.0, P 80.0, K 60.0
 AMOUNT OF MOISTURE - 410 MM
 NUMBER OF IRRIGATIONS - 2

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LONGING	CORRELATIONS	
											+	- PROB=.05
5	RANSOM	3222.04	49.50	112.75	2.25	.00	95.00	.00	35.08	1.00		
13	BRAGG	2425.18	47.25	114.00	1.75	.00	100.00	.00	39.10	1.00		
6	CORB	2210.37	51.75	113.25	4.00	.00	97.50	.00	37.03	1.00		
9	DAVIS	2149.88	51.75	116.00	1.50	.00	96.25	.00	32.20	1.25		
2	FILLITO	2131.98	49.50	110.50	1.25	.00	97.50	.00	64.88	1.00		
3	BOSSIER	1968.41	57.75	113.25	3.50	.00	97.50	.00	40.20	1.00		
4	WILLIAMS	1862.24	40.00	97.75	1.75	.00	90.00	.00	42.70	1.00		
7	JAMES	1601.76	42.00	104.00	1.75	.00	95.00	.00	38.65	1.00		
10	CALLAND	1381.41	38.00	96.75	1.50	.00	92.50	.00	46.48	1.00		
11	FRANKLIN	1333.26	39.00	94.25	2.50	.00	95.75	.00	35.78	1.00		
12	CUTLER 71	1242.52	39.50	95.00	1.00	.00	93.75	.00	41.83	1.00		
8	FORREST	1231.41	43.50	113.50	3.75	.00	98.75	.00	25.48	1.00		
1	KAHALA	959.21	43.25	96.25	2.25	.00	87.50	.00	39.78	1.00		
GRAND MEAN												
STANDARD ERROR OF A VARIETY MEAN												
COEFFICIENT OF VARIATION												
5% LSD VARIETY MEANS (*****NS)												
C O R R E L A T I O N S												
YIELD	KG/HA	1.00	*57++	*64++	.02	.00	*22	.00	*07	*1.1		
DAYS TO FLOWER		.57++	1.00	*81++	*36++	.00	*29+	.00	*01	*1.15		
DAYS TO MATURITY		.64++	*81++	1.00	*35+	.00	*45++	.00	*18	*1.17		
NODULE ABUND 1		.02	*36++	*35+	1.00	.00	*21	.00	*40++	*0.3		
NODULE ABUND 2		.00	*00	*00	*00	1.00	*00	.00	*00	*0.0		
NODULE ACT. 1		*22	*29+	*45++	*21	*00	*1.00	*00	*13	*1.2		
NODULE ACT. 2		*00	*00	*00	*00	*00	*00	1.00	*00	*0.0		
PLANT HEIGHT		.07	*01	-.18	-.40++	.00	-.13	.00	*1.00	*.09		
LODGING		.11	*15	*17	-.03	.00	*12	.00	*00	*1.00		
SHATTER		-.20	-.15	-.26	-.26	.00	*01	*00	-.13	*.21		
PLANTS HARVEST		*19	-.28+	-.19	-.27	*00	*01	*00	*22	*.13		
FODS PER POD		*65++	*77++	*74++	*05	*00	*29+	.00	*27+	*.09		
POD HEIGHT		*34+	*52++	*44++	*00	*00	*04	.00	*14	*.12		
100 SEED WEIGHT		*01	-.28+	-.37++	-.36++	*00	-.49++	.00	-.15	*.18		
QUALITY OF SEED		*01	*09	*01	-.31+	*00	*03	*00	*11	*.12		
GERM. PERCENT		*46++	*29+	*38++	*17	*00	*16	*00	*14	*.05		

TABLE 90 EXPERIMENT 136 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
5	RANSOM	1.00	44.75	88.60	5.85	16.20	1.00	97.25
13	BRAGG	1.00	52.75	99.07	6.03	11.98	1.75	95.75
6	COBB	1.00	33.00	70.30	6.68	10.55	1.25	95.75
9	DAVIS	2.00	31.25	88.35	6.63	15.03	2.00	84.75
2	RILLITO	1.00	42.75	108.35	6.03	10.73	1.75	94.75
3	BOSSIER	1.25	39.50	105.10	6.03	13.00	1.50	92.25
4	WILLIAMS	1.00	49.25	50.40	4.63	14.93	1.75	87.00
7	JAMES	1.00	31.75	83.00	6.70	14.53	1.00	95.75
10	CALLAND	1.25	45.75	37.95	5.85	14.98	1.25	88.50
11	FRANKLIN	1.75	42.75	40.18	3.93	12.93	1.25	92.00
12	CUTLER 1	2.25	48.25	45.15	4.53	14.38	2.00	82.25
8	FORREST	1.00	40.00	53.08	4.45	11.33	1.25	86.75
1	KAHALA	1.00	32.25	41.45	6.38	15.38	1.25	81.00
	GRAND MEAN	1.27	41.08	70.11	5.67	13.53	1.46	90.29
	STANDARD ERROR OF A VARIETY MEAN	*.13	1.58	4.98	.23	.46	.31	2.46
	COEFFICIENT OF VARIATION	19.95%	7.68%	14.20%	8.11%	6.81%	42.79%	5.46%
	5% LSD VARIETY MEANS (*****NS)	.36	4.52	14.27	.66	1.32	*****	7.06
	CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)							
	YIELD	-.20	*.19	*.66++	*.34+	*.01	*.01	*.46++
	KG/HA	-.15	-.28+	*.77++	*.52++	-.28+	.09	*.29+
	FLOWER	-.26	-.19	*.74++	*.44++	-.37++	.01	*.38++
	DAYS TO MATURITY	-.26	-.27	*.05	*.00	-.36++	-.31+	*.17
	NODULE ABUND 1	-.26	*.00	*.00	*.00	*.00	*.00	*.00
	NODULE ABUND 2	*.00	*.01	*.29+	-.04	-.49++	*.03	*.16
	ACT. 1	*.01	*.00	*.00	*.00	*.00	*.00	*.00
	NODULE ACT. 2	*.00	*.22	*.27+	*.14	-.15	*.11	*.14
	PLANT HEIGHT	-.13	*.13	*.09	*.12	*.18	*.12	*.05
	LODGING	*.21	*.10	-.22	*.24	*.19	*.28+	*.44++
	SHATTER	1.00	1.00	-.06	-.46++	-.02	*.11	*.01
	PLANTS HARVEST	*.10	-.06	1.00	*.46++	-.25	.07	*.49++
	PLANT HEIGHT	-.22	-.24	*.46++	1.00	*.06	-.02	*.20
	POD HEIGHT	-.24	-.02	-.25	*.06	1.00	-.06	*.14
	100 SEED WEIGHT	*.19	*.11	*.07	-.02	-.06	1.00	-.30+
	QUALITY OF SEED PERCENT	*.28+	*.01	*.49++	*.20	-.14	-.30+	1.00

TABLE 91 EXPERIMENT 7 YEAR 1978

REGION - ASIA
 SITE - BOGOR
 LATITUDE - 6 DEG. 30 MIN. S
 COOPERATOR - A. DINIYATI
 PLANTED - MAY 16, 1978
 SOIL TYPE - BROWN LATOSOL, PH 5.8
 FERTILIZER USED (KG/HA) - N 25.0, P 25.0, K 25.0
 AMOUNT OF MOISTURE - 1157 MM
 NUMBER OF IRRIGATIONS - 2
 LOCAL VARIETIES - E/1667, 1682
 COUNTRY - INDONESIA
 ELEVATION - 270 M
 LONGITUDE - 107 DEG. E
 DATE HARVESTED - AUGUST, 1978

TABLE 91

EXPERIMENT 7 YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
15	E/1667	.00	21.65	13.58	11.75	1.00	.00	44.4	19.9
1	CH-3	.00	24.55	16.60	10.88	1.25	.00	44.5	20.6
14	WILLIAMS	.00	14.88	11.10	11.25	1.00	.00	45.1	19.2
12	FILLITO	.00	26.90	9.15	9.50	1.50	.00	45.2	19.7
5	CREA	.00	25.03	13.43	8.00	1.25	.00	42.6	18.3
3	SJ-2	.00	30.53	15.30	9.13	1.00	.00	43.5	18.7
11	KAHALA	.00	16.30	12.70	11.25	2.25	.00	45.5	19.1
7	TUNIA	.00	26.28	11.65	9.63	1.50	.00	45.0	18.6
10	IMPROVED FELICAN	.00	23.48	13.83	8.88	1.00	.00	44.1	20.2
16	1682	.00	37.88	18.68	3.88	3.75	.00	45.2	19.5
4	HARDEE LS	.00	26.08	19.50	7.63	2.00	.00	44.6	18.4
6	JAC-2	.00	22.13	15.15	8.75	1.75	.00	45.8	17.1
2	UFV-1	.00	18.93	14.35	6.63	2.00	.00	46.5	17.6
13	BOSSIER	.00	17.15	21.45	7.88	2.00	.00	47.2	16.3
9	JOFITER	.00	15.88	25.53	7.38	3.75	.00	45.2	16.6
8	CARIBE	.00	13.25	15.75	6.38	3.50	.00		
	GRAND MEAN	.00	22.55	15.48	8.67	1.91	.00		
	VARIETY MEAN	.00	1.98	.81	.35	.19	.00		
	COEFFICIENT OF VARIATION	.00%	17.52%	10.42%	8.17%	19.84%	.00%		
	5% LSD VARIETY MEANS (*****=NS)	.00	5.63	2.30	1.01	.54	.00		
	CORRELATIONS		(+ - PROB=.05)	(+ - PROB=.01)					
	YIELD KG/HA	.00	*.37+	-.54+	*.60+	-.61+	.00		
	DAYS TO FLOWER	.00	*.16	*.59+	-.52+	*.53+	.00		
	DAYS TO MATURITY	.00	*.24	*.47+	-.38+	*.29+	.00		
	NODE ABUND 1	.00	*.00	*.00	*.00	*.00	.00		
	NODE ABUND 2	.00	*.00	*.00	*.00	*.00	.00		
	NODE ACT. 1	.00	*.00	*.00	*.00	*.00	.00		
	NODE ACT. 2	.00	*.00	*.00	*.00	*.00	.00		
	PLANT HEIGHT	.00	*.37+	*.16	-.16	*.15	.00		
	LOGGING	.00	*.03	*.43+	-.33+	*.46+	.00		
	SHATTER	1.00	*.00	*.00	*.00	*.00	.00		
	PLANTS HARVEST	1.00	*.00	*.00	*.00	*.00	.00		
	PODS PER PLANT	.00	1.00	-.17	-.24	-.10	.00		
	POD HEIGHT	.00	-.17	1.00	-.43+	*.53++	.00		
	100 SEED WEIGHT	.00	-.24	-.43+	1.00	-.66++	.00		
	QUALITY OF SEED	.00	-.10	*.53+	-.66++	1.00	.00		
	PERCENT GERM.	.00	*.00	*.00	*.00	*.00	1.00		

TABLE 92 EXPERIMENT 36 YEAR 1973

REGION - ASIA
SITE - MEDAN
LATITUDE - 3° E
COOPERATOR - E
DATE PLANTED -
SOIL TYPE - SAW
FERTILIZER USE -
AMOUNT OF MOIS

COUNTRY - INDONESIA
ELEVATION - 27 M
LONGITUDE - 98 DEG.
DATE HARVESTED - NOV.
PH 5.9
%, PH 25.0

— INDONESIA
N — 27° M
E — 98° DEG. 39' MIN. E
WESTERN — NOVEMBER, 1978
9
0

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND. 1	NODULE ABUND. 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	
									LOGGING	LOGGING
1 CH-3		3640.73	32.50	96.00	.00	.00	40.00	32.50	32.65	3.00
3 SJ-2		3273.57	31.00	92.00	.00	.00	30.00	33.75	74.50	2.00
1.2 RILLITO		2963.51	28.25	92.00	.00	.00	51.25	78.75	42.30	1.00
5 ORBA		2846.40	31.75	91.75	.00	.00	50.00	73.75	80.25	2.00
13 BOSSIER		2613.02	32.25	92.00	.00	.00	43.75	71.25	46.15	1.00
8 CARIBE		2406.31	32.00	107.00	.00	.00	46.75	76.25	74.78	1.00
16 COBB		2302.13	28.25	96.00	.00	.00	46.25	82.50	20.05	1.00
7 TUNIA		2264.20	32.00	92.00	.00	.00	38.75	80.00	56.35	1.00
9 JUPITER		2248.78	38.25	105.00	.00	.00	31.25	76.25	51.38	1.00
6 IAC-2		2221.69	32.25	96.00	.00	.00	33.75	86.25	72.10	2.00
15 RANSOM		2035.41	28.75	96.00	.00	.00	42.50	86.00	28.00	1.00
10 IMPROVED PELICAN		1984.98	31.75	87.00	.00	.00	47.50	86.25	50.25	3.00
4 HARDEE LS		1952.06	32.75	107.00	.00	.00	57.50	80.00	46.55	1.00
2 UFV-1		1763.27	31.50	96.00	.00	.00	51.25	81.25	32.25	1.00
14 WILLIAMS		1744.93	28.00	89.00	.00	.00	36.25	67.50	39.20	1.00
11 KAHALA		903.51	28.00	89.00	.00	.00	50.00	76.25	36.50	1.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
CORRELATIONS										
C - PROB=.05										
C+ - PROB=.01										
YIELD KG/HA	1.00	.19	.05	.00	.00	.00	.00	.06	.5044	.264
DAYS TO FLOWER	.12	1.00	.5544	.00	.00	.00	.264	-.17	.3744	.06
DAYS TO MATURITY	.05	.5544	1.00	.00	.00	.00	.09	-.14	-.01	-.12
NODULE ABUND. 1	.00	.00	.00	1.00	.00	.00	.00	-.00	.00	.00
NODULE ABUND. 2	.00	.00	.00	.00	1.00	.00	.00	-.00	.00	.00
NODULE ACT. 1	-.274	-.264	.09	.00	.00	1.00	.00	-.23	-.14	-.13
NODULE ACT. 2	.06	-.17	-.14	.00	.00	-.23	1.00	.14	.274	.274
PLANT HEIGHT	.5044	.3744	-.01	.00	.00	-.14	1.00	.00	.6444	.6444
LOGGING	.264	.08	-.19	.00	.00	-.13	.274	.00	1.00	1.00
SHATTER	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
PLANTS HARVEST	.4844	-.04	-.21	.00	.00	-.15	.15	.13	.18	.18
PLANTS PER PLANT	.4544	-.284	.4344	.00	.00	-.07	.00	.00	.5244	.14
POD HEIGHT	.3344	-.4844	.14	.00	.00	-.18	.19	.19	.7844	.514
100 SEED QUALITY	-.14	-.4644	-.4844	.00	.00	-.16	.13	.13	-.4544	-.04
OF SEED PERCENT GERM.	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

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TABLE 92 EXPERIMENT 36 YEAR 1973 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
1 CH-3		1.00	307.00	52.68	12.50	13.55	.00	.00	44.0	21.4
3 SJ-2		1.00	272.50	70.20	10.50	11.58	.00	.00	40.7	21.5
12 RILLITO		1.00	226.75	58.58	6.93	13.25	.00	.00	43.4	22.9
5 ORBA		1.00	308.75	41.83	9.08	13.25	.00	.00	42.9	22.4
13 BOSSIER		1.00	299.50	41.20	9.30	12.80	.00	.00		
8 CARIBE		1.00	203.75	88.65	7.78	7.93	.00	.00	40.5	20.8
16 CORB		1.00	297.00	33.28	6.45	15.50	.00	.00	40.5	24.8
7 TUNIA		1.00	166.75	63.40	8.18	13.03	.00	.00	42.3	23.1
9 JUPITER		1.00	213.75	41.40	9.70	12.68	.00	.00	44.7	22.5
6 TAC-2		1.00	221.25	59.05	12.00	11.83	.00	.00	43.0	22.3
15 RANSOM		1.00	291.25	25.68	6.43	16.15	.00	.00	42.2	26.8
10 IMPROVED PELICAN		1.00	253.50	47.28	12.18	11.68	.00	.00	33.0	27.6
4 HARDEE LS		1.00	156.00	66.90	9.55	14.20	.00	.00	42.8	23.3
2 UFV-1		1.00	299.25	28.85	7.18	12.98	.00	.00	45.1	21.3
14 WILLIAMS		1.00	278.50	23.13	6.63	16.53	.00	.00	43.5	23.5
11 KAHALA		1.00	105.25	21.18	7.30	15.45	.00	.00	33.0	28.2
GRAND MEAN		1.00	243.80	48.33	8.98	13.09	.00	.00		
STANDARD ERROR OF A VARIETY MEAN		1.00	12.45	3.71	.71	.68	.00	.00		
COEFFICIENT OF VARIATION		*.02	10.21%	15.35%	15.81%	10.44%	.00%	.00%		
5% LSD VARIETY MEANS (*****NS)		*.00	35.46	10.56	2.02	1.95	*.00	*.00		

CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)

YIELD KG/HA	*.00	*.48++	*.45++	*.33++	-.14	*.00	*.00	*.00	*.00	*.00
DAYS TO FLOWER	*.00	-.04	*.28+	*.48++	-.46++	*.00	*.00	*.00	*.00	*.00
DAYS TO MATURITY	*.00	-.21	*.43++	*.14	-.48++	*.00	*.00	*.00	*.00	*.00
NOTULE ABUND 1	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00
NOTULE ABUND 2	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00
NOTULE ACT. 1	*.00	-.15	-.07	-.18	-.16	*.00	*.00	*.00	*.00	*.00
NOTULE ACT. 2	*.00	*.15	*.00	*.12	*.13	*.00	*.00	*.00	*.00	*.00
PLANT HEIGHT	*.00	*.13	*.52++	*.78++	-.45++	*.00	*.00	*.00	*.00	*.00
LOGGING	*.00	*.18	*.14	*.51++	-.04	*.00	*.00	*.00	*.00	*.00
SHATTER	1.00	*.00	*.00	*.09	*.19	*.00	*.00	*.00	*.00	*.00
PLANTS HARVEST	*.00	1.00	-.32++	*.41++	-.74++	*.00	*.00	*.00	*.00	*.00
PODS PER PLANT	*.00	-.32++	1.00	*.41++	-.49++	*.00	*.00	*.00	*.00	*.00
POD HEIGHT	*.00	*.09	*.41++	1.00	*.49++	1.00	*.00	*.00	*.00	*.00
100 SEED WEIGHT	*.00	*.19	-.74++	-.49++	*.00	*.00	*.00	*.00	*.00	*.00
QUALITY OF SEED	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00
PERCENT GERM.	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00

TABLE 93 EXPERIMENT 20 YEAR 1978

REGION - ASIA
 COUNTRY - INDONESIA
 SITE - SOROPADAN
 ELEVATION - 500 M
 DATE PLANTED - JUNE 22, 1978
 DATE HARVESTED -
 SOIL TYPE - SAND 22%, SILT 34%, CLAY 44%
 FERTILIZER USED (KG/HA) - N 25.0, P 26.4, K 24.9
 LOCAL VARIETY - TAICHUNG

TABLE 93 EXPERIMENT 20 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
9	JUPITER	1.00	161.25	31.40	15.90	6.83	.00	.00
16	TAICHUNG	1.00	292.75	30.85	11.15	7.88	.00	.00
5	ORBA	1.00	186.75	42.90	9.35	8.15	.00	.00
10	IMPROVED FELICAN	1.00	263.50	32.25	13.55	7.98	.00	.00
3	SJ-2	1.00	180.50	37.80	11.15	8.33	.00	.00
1	CH-3	1.00	155.50	46.25	11.40	8.70	.00	.00
15	RANSOM	1.00	226.75	35.15	7.40	8.08	.00	.00
14	WILLIAMS	1.00	207.25	21.65	9.90	10.60	.00	.00
6	TAC-2	1.00	157.25	33.55	10.45	7.73	.00	.00
12	RILLITO	1.00	151.50	35.10	8.45	8.53	.00	.00
11	GASOY 17	1.00	203.25	22.95	8.60	8.35	.00	.00
4	HARDEE LS	1.00	150.25	40.60	11.60	6.38	.00	.00
8	CARIBE	1.00	183.00	31.95	9.65	6.23	.00	.00
13	BOSSIER	1.00	208.25	31.20	10.90	7.68	.00	.00
7	TUNIA	1.00	99.25	27.70	9.80	10.40	.00	.00
2	UFV-1	1.00	115.25	28.80	6.55	6.38	.00	.00
GRAND MEAN								
STANDARD ERROR OF A VARIETY MEAN								
COEFFICIENT OF VARIATION								
5% LSD VARIETY MEANS (*****NS)								
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)								
YIELD KG/Ha								
DAYS TO FLOWER								
DAYS TO MATURITY								
NODULE ABUND 1								
NODULE ABUND 2								
NODULE ACT. 1								
NODULE ACT. 2								
PLANT HEIGHT								
LOGGING								
SHATTER								
PLANTS HARVEST								
PODS PER PLANT								
POD HEIGHT								
100 SEED WEIGHT								
QUALITY OF SEED								
PERCENT GERM.								

TABLE 94 EXPERIMENT 209

YEAR 1978

REGION - ASIA
 SITE - SUNEON
 LATITUDE - 37 DEG. 17 MIN. S
 COOPERATOR - K.Y. PARK
 DATE PLANTED - JUNE 23, 1978
 SOIL TYPE - SILTY LOAM, PH 5.9
 FERTILIZER USED (KG/HA) - N 20.0, P 22.6, K 36.5
 AMOUNT OF MOISTURE - 983.7 MM
 SUBSTITUTE VARIETY - KWANGKYO

COUNTRY - KOREA
 ELEVATION - 37 M
 LONGITUDE - 126 DEG. 58 MIN.)
 DATE HARVESTED - SEPTEMBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING	CORRELATIONS	
											++ - PROB=.05	++ - PROB=.01)
11	ELF	1750.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	UNION	1650.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
1	WILLIAMS	1502.50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	FRANKLIN	1197.50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	SWIFT	1102.50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	KWANGKYO	1077.50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	MITCHELL	1045.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	HODGSON	1012.50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	CORSOY	1000.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	COLUMBUS	900.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	CALLAND	805.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	HARCOR	642.50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	ALTONA	575.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	EVANS	532.50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	CRAWFORD	370.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	STEELE	340.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
GRAND MEAN												
VARIETY MEAN												
COEFFICIENT OF VARIATION												
5% LSD VARIETY MEANS (*****=NS)												
CORRELATIONS												
YIELD KG/HA	1.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
DAYS TO FLOWER	.00	1.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
DAYS TO MATURITY	.00	.00	1.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ABUND 1	.00	.00	.00	1.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ABUND 2	.00	.00	.00	.00	1.00	.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 1	.00	.00	.00	.00	.00	1.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 2	.00	.00	.00	.00	.00	.00	1.00	.00	.00	.00	.00	.00
PLANT HEIGHT	.56++	.00	.00	.00	.00	.00	.00	1.00	.00	.00	.00	.00
LODGING	.00	.00	.00	.00	.00	.00	.00	.00	1.00	.00	.00	.00
SHATTER	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.00	.00	.00
PLANTS HARVEST	.27+	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
PODS PER PLANT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
POD HEIGHT	.54++	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
100 SEED WEIGHT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
QUALITY OF SEED GERM.	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
PERCENT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

(CONTINUED)

YEAR 1978

EXPERIMENT 209

TABLE 94

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
11	ELF	.00	.00	13.00	.00	13.23	.00	.00
13	UNION	.00	.00	13.75	.00	15.05	.00	.00
1	WILLIAMS	.00	.00	13.00	.00	13.70	.00	.00
3	FRANKLIN	.00	.00	16.75	.00	11.08	.00	.00
3	SWIFT	.00	.00	13.75	.00	11.55	.00	.00
7	KWANGKYO	.00	.00	18.75	.00	16.15	.00	.00
4	MITCHELL	.00	.00	15.50	.00	11.83	.00	.00
5	HODGSON	.00	.00	13.50	.00	10.95	.00	.00
10	CORSOY	.00	.00	15.25	.00	9.63	.00	.00
14	COLUMBUS	.00	.00	19.00	.00	13.28	.00	.00
12	CALLAND	.00	.00	13.50	.00	10.80	.00	.00
2	HARCOR	.00	.00	13.50	.00	9.28	.00	.00
9	ALTONA	.00	.00	11.25	.00	12.28	.00	.00
6	EVANS	.00	.00	11.25	.00	9.18	.00	.00
15	CRAWFORD	.00	.00	15.25	.00	12.13	.00	.00
16	STEELE	.00	.00	11.25	.00	10.58	.00	.00
8	GRAND MEAN	.00	.00	14.27	.00	11.92	.00	.00
STANDARD ERROR OF A VARIETY MEAN	.00	.00	.00	1.27	.00	.37	.00	.00
COEFFICIENT OF VARIATION	.00%	.00%	.00%	17.82%	.00%	6.17%	.00%	.00%
5% LSD VARIETY MEANS (*****NS)	.00	.00	3.62	.00	1.05	.00	.00	.00
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)								
YIELD	KG/HA	.00	.27+	.00	.54+	.00	.00	.00
DAYS TO FLOWER		.00	.00	.00	.00	.00	.00	.00
DAYS TO MATURITY		.00	.00	.00	.00	.00	.00	.00
NODULE ABUND 1		.00	.00	.00	.00	.00	.00	.00
NODULE ABUND 2		.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 1		.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 2		.00	.00	.48++	.00	.42++	.00	.00
PLANT HEIGHT		.00	.00	.00	.00	.00	.00	.00
LOGGING		.00	.00	.00	.00	.00	.00	.00
SHATTER		1.00	.00	.00	.00	.00	.00	.00
PLANTS HARVEST		1.00	.00	1.00	.00	.33+	.00	.00
PODS PER PLANT		.00	.00	.00	1.00	.00	.00	.00
POD HEIGHT		.00	.00	.00	.33++	.00	.00	.00
100 SEED WEIGHT		.00	.00	.00	.00	.00	1.00	.00
QUALITY OF SEED		.00	.00	.00	.00	.00	.00	.00
PERCENT GERM.		.00	.00	.00	.00	.00	.00	1.00

TABLE 95 EXPERIMENT 25 YEAR 1978

REGION - ASIA
 SITE - SARAWAK
 LATITUDE - 1 DEG. 10 MIN. N LONGITUDE - 30 M
 COOPERATORS - MAC PHERSON & J. L. CHIA DATE HARVESTED - AUGUST, 1978
 DATE PLANTED - MAY 15, 1978 SOIL TYPE - RECENT ALLUVIAL SOIL, TERBAT SERIES SAND 22.69%, SILT 31.55%, CLAY 43.71%, PH 5.6
 FERTILIZER USED (KG/HA) - N 25.0, P 25.0, K 25.0
 AMOUNT OF MOISTURE - 923 MM
 LOCAL VARIETY - NONUK

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING	COUNTRY - MALAYSIA	
											ELEVATION - 30 M	LONGITUDE - 110 DEG. 33 MIN. E
4	HARDEE LS	2279.62	41.00	112.50	3.00	1.75	67.50	65.00	29.45	1.00		
9	JUPITER	2102.10	41.00	108.25	3.50	2.00	77.50	57.50	49.70	1.00		
7	TUNIA	34.00	105.00	3.25	2.25	95.00	27.50	43.25	1.00			
3	SJ-2	2042.59	36.00	98.75	3.75	2.25	86.25	37.50	54.35	1.00		
1	CH-3	1912.88	36.00	104.00	4.00	2.25	65.00	41.25	69.95	1.00		
6	IAC-2	1875.37	36.00	106.00	3.50	2.50	68.75	47.50	51.30	1.00		
10	IMPROVED PELICAN	1837.87	36.00	96.25	4.00	3.00	52.50	22.50	57.75	1.00		
8	CARIBBE	1833.70	39.00	127.00	3.50	2.25	82.50	72.50	72.10	1.00		
13	WILLIAMS	1787.86	29.00	87.50	3.00	2.50	77.50	42.50	37.35	1.00		
12	BOSSIER	1621.16	36.00	99.25	3.00	2.50	85.00	25.00	38.00	1.00		
11	RILLITO	1562.81	31.00	91.25	3.25	2.50	70.00	15.00	33.95	1.00		
14	RANSOM	1541.97	31.00	105.75	3.00	2.25	76.25	38.75	24.70	1.00		
2	UFU-1	1450.29	33.25	106.00	4.00	2.50	65.00	52.50	23.55	1.00		
5	ORBA	1316.93	36.00	92.75	3.75	2.25	53.75	21.25	40.55	1.00		
16	GASOY 17	1141.89	29.00	87.50	3.50	3.50	80.00	28.75	22.10	1.00		
15	NONUK	1041.87	43.00	106.50	3.00	2.00	52.50	57.50	68.55	1.00		
GRAND MEAN		1721.44	35.45	102.14	3.45	2.39	72.19	40.78	44.79	1.00		
STANDARD ERROR OF A VARIETY MEAN		149.47	.19	1.77	.24	.29	12.63	8.89	4.17	.00		
COEFFICIENT OF VARIATION		17.37%	1.06%	3.47%	13.70%	24.21%	35.00%	43.59%	18.62%	.00%		
5% LSD VARIETY MEANS (*****=NS)		425.76	.53	5.05	.67	.82	*****	25.31	11.87	.00		
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)												
YIELD KG/HA	1.00	.20	.31+	-.08	-.24	.31+	.16	.33++	.00			
DAYS TO FLOWER	.20	1.00	.62++	-.04	-.40++	-.14	.44++	.53++	.00			
DAYS TO MATURITY	.31+	.62++	1.00	-.06	-.41++	-.02	.59++	.36++	.00			
NODULE ABUND 1	-.08	-.04	-.06	1.00	.26+	-.18	-.09	.03	.00			
NODULE ABUND 2	-.24	-.40++	-.41++	.26+	1.00	.09	-.45++	-.18	.00			
NODULE ACT. 1	.31+	-.14	-.02	-.18	.09	1.00	-.00	.09	.00			
NODULE ACT. 2	.16	.44++	.59++	-.09	-.45++	-.00	1.00	.21	.00			
PLANT HEIGHT	.33++	.53++	.36++	.03	-.18	.09	.21	.00				
LOGGING	.00	.00	.00	.00	.00	.00	.00	.00				
SHATTER	.00	.00	.00	.00	.00	.00	.00	.00				
PLANTS HARVEST	-.15	-.46++	-.45++	.23	.36++	-.04	-.29+	-.38++	.00			
PODS PER PLANT	.57++	.59++	.55++	-.12	-.37++	.20	.32+	.53++	.00			
POD HEIGHT	.19	.68++	.43++	.06	-.27+	-.11	.32+	.52++	.00			
100 SEED WEIGHT	.35++	-.54++	-.28+	-.20	.03	.25+	-.19	-.45++	.00			
QUALITY OF SEED	.01	.05	.22	.16	-.02	-.16	.15	-.00				
PERCENT GERM.	.00	.00	.00	.00	.00	.00	.00	.00				

TABLE 95 EXPERIMENT 25 YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
4	HARDEE LS	1.00	214.75	27.38	12.20	15.70	1.50	.00	35.9	25.7
9	JUPITER	1.00	241.50	26.53	16.50	16.65	1.75	.00	40.3	26.4
7	TUNIA	1.00	206.75	24.68	11.20	20.63	1.25	.00	39.7	23.8
3	S-J-2	1.00	230.75	27.85	15.85	12.48	1.00	.00	40.1	18.6
1	CH-3	1.00	225.25	20.90	12.10	15.20	1.50	.00	44.6	20.0
6	IAC-2	1.00	236.75	21.08	12.00	15.35	1.50	.00	42.0	22.3
10	IMPROVED PELICAN	1.00	275.75	20.83	11.65	13.40	1.75	.00	41.9	22.6
8	CARIBE	1.00	216.50	30.68	13.65	10.30	1.75	.00	44.1	16.1
13	WILLIAMS	1.00	282.75	13.25	10.15	19.58	1.50	.00	43.7	23.5
12	BOSSIER	1.00	278.00	15.45	8.75	15.43	1.75	.00	41.9	23.1
11	RILLITO	1.00	244.00	14.35	8.10	14.90	1.25	.00	42.1	23.1
14	RANSOM	1.00	264.25	12.78	8.15	17.40	1.75	.00	42.8	20.6
2	UFV-1	1.00	239.75	15.28	7.75	15.08	1.75	.00	41.0	20.3
5	ORBA	1.00	217.75	18.70	8.95	13.20	1.50	.00	40.7	22.4
16	GASOY 17	1.00	287.50	11.20	6.45	15.88	1.25	.00	41.8	15.6
15	NONOK	1.00	206.00	22.78	18.45	8.93	1.25	.00		
	GRAND MEAN	1.00	241.75	20.23	11.37	15.00	1.50	.00		
	STANDARD ERROR OF A VARIETY MEAN	.00	11.47	2.81	1.18	.43	.26	.00		
	COEFFICIENT OF VARIATION	.00%	9.49%	27.76%	20.77%	5.69%	34.78%	.00%		
	5% LSD VARIETY MEANS (*****=NS)	.00	32.67	8.00	3.36	1.22	*****			
	C O R R E L A T I O N S		(+ - PROB=.05		(+ - PROB=.01)					
	YIELD KG/HA	.00	-.15	.57++	.19	.35++	.01	.00		
	DAYS TO FLOWER	.00	-.46++	.59++	.68++	-.54++	.05	.00		
	DAYS TO MATURITY	.00	-.45++	.55++	.43++	-.28+	.22	.00		
	NODULE ABUND 1	.00	+.23	-.12	.06	-.20	.16	.00		
	NODULE ABUND 2	.00	+.36++	-.37++	-.27+	.03	-.02	.00		
	NODULE ACT. 1	.00	-.04	.20	-.11	.25+	-.16	.00		
	NODULE ACT. 2	.00	-.29+	.32+	.32++	-.19	.15	.00		
	PLANT HEIGHT	.00	-.38++	.53++	.52++	-.45++	-.00	.00		
	LODGING	.00	.00	.00	.00	.00	.00	.00		
	SHATTER	1.00	.00	.00	.00	.00	.00	.00		
	PLANTS HARVEST	.00	1.00	-.47++	-.28+	.22	.14	.00		
	PODS PER PLANT	.00	-.47++	1.00	.56++	-.22	-.12	.00		
	POD HEIGHT	.00	-.28+	.56++	1.00	-.40++	-.03	.00		
	100 SEED WEIGHT	.00	.22	-.22	-.40++	1.00	-.02	.00		
	QUALITY OF SEED	.00	.14	-.12	-.03	-.02	1.00	.00		
	PERCENT GERM.	.00	.00	.00	.00	.00	1.00			

TABLE 96 EXPERIMENT 139 YEAR 1978

REGION - ASIA
 SITE - BIRGUNJ
 LATITUDE - 27 DEG. 2 MIN. N
 COOPERATOR - R.P. SAH, B.R. PANDEY
 DATE PLANTED - JUNE 23, 1978
 SOIL TYPE - SILT LOAM
 FERTILIZER USED (KG/HA) - N 25.0, P 26.4, K 24.9
 AMOUNT OF MOISTURE - 1.387 MM

COUNTRY - NEPAL
 ELEVATION - 100 M
 LONGITUDE - 84 DEG. 35 MIN. E
 DATE HARVESTED - SEPTEMBER 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE AROUND 1	NODULE AROUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
2	RILLITO	3196.47	48.00	123.00	2.50	1.00	95.00	80.00	83.25	1.75
15	BRAGG	2729.71	50.00	127.00	2.25	1.50	92.50	65.00	41.50	1.00
1	IMPROVED PELICAN	2267.12	56.00	127.00	3.00	2.50	92.50	60.00	41.25	2.00
6	COBB	2200.44	48.00	136.00	3.00	1.50	72.50	75.00	39.25	1.00
5	RANSOM	2008.73	48.00	122.50	1.50	2.50	100.00	75.00	30.25	1.00
9	DAVIS	1825.36	46.00	127.00	2.00	2.50	97.50	90.00	38.75	1.00
10	GASOY 17	1733.68	48.00	119.00	3.50	2.00	85.00	85.00	37.00	1.00
3	BOSSIER	1733.68	48.00	132.00	2.50	2.00	87.50	85.00	44.25	1.00
16	EVANS	1441.95	42.00	102.00	2.50	2.25	97.50	87.50	51.25	1.00
12	FRANKLIN	1408.61	37.00	86.00	2.50	2.00	95.00	60.00	40.25	1.00
14	MITCHELL	1346.10	37.00	100.00	2.50	1.50	97.50	85.00	49.25	1.00
4	WILLIAMS	1308.59	42.00	96.00	3.00	1.50	90.00	80.00	43.00	1.00
11	CALLAND	1308.59	37.00	89.00	2.25	2.00	85.00	85.00	52.75	1.00
13	CUTLER 74	1171.07	37.00	86.00	2.75	2.50	87.50	70.00	45.00	1.00
8	FORREST	979.36	48.00	103.00	3.00	2.00	90.00	60.00	30.50	1.00
7	JAMES	946.02	48.00	100.00	1.50	2.50	92.50	80.00	53.75	1.25
GRAND MEAN										
255.68	45.00	110.97	2.52	1.98	91.09	76.41	49.53	1.13		
29.64%	*.00	1.01	.47	.25	5.15	6.44	3.24	.09		
728.27	*.00%	1.81%	37.40%	25.42%	11.30%	16.85%	13.08%	16.23%		
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										

C O R R E L A T I O N S (+ = PROB=.05 - = PROB=.01)

YIELD KG/HA	1.00	*.434+	*.584+	-.04	-.24	*.05	*.04	*.334+	*.344+
DAYS TO FLOWER	*.434+	1.00	*.804+	*.03	*.05	-.04	*.01	*.364+	*.494+
DAYS TO MATURITY	*.534+	*.804+	1.00	*.01	*.01	-.09	-.09	*.284	*.254
NODULE ABUND 1	-.04	*.03	*.01	1.00	-.09	-.524	-.04	*.15	*.09
NODULE ABUND 2	-.24	*.05	-.09	1.00	-.09	1.12	-.09	*.06	*.01
NODULE ACT. 1	*.05	-.04	-.09	-.594+	*.12	1.00	-.10	*.03	*.01
NODULE ACT. 2	*.04	*.01	*.284	-.04	-.02	-.10	*.10	*.10	*.01
PLANT HEIGHT	*.334+	*.364+	*.15	*.06	*.03	*.10	-.17	-.17	
LODGING	*.344+	*.484+	*.25+	*.09	*.01	*.01	*.19	*.334+	
SHATTER	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	1.00
PLANTS HARVEST	*.25	*.09	*.00	*.11	*.00	*.01	*.464+	*.13	*.12
PODS PER PLANT	*.30+	*.42+	*.28+	*.15	-.12	*.08	-.02	*.484+	*.604+
FOD HEIGHT	*.14	*.24	*.21	*.26+	-.06	-.13	-.09	*.464+	*.384+
100 SEED WEIGHT	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	
QUALITY OF SEED	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	
PERCENT GERM.	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	

TABLE 96 EXPERIMENT 139 YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
2 RILLITO	.00	98.50	80.00	10.75	.00	.00	.00
15 BRAGO	.00	103.25	50.75	8.25	.00	.00	.00
1 IMPROVED FELICAN	.00	105.25	69.25	13.25	.00	.00	.00
6 COBB	.00	93.75	54.25	10.75	.00	.00	.00
5 RANSOM	.00	93.75	49.00	9.50	.00	.00	.00
9 DAVIS	.00	84.00	45.75	7.25	.00	.00	.00
10 GRASOY 17	.00	96.00	55.50	9.50	.00	.00	.00
3 BOSSIER	.00	95.75	37.50	11.75	.00	.00	.00
16 EVANS	.00	86.25	59.50	8.25	.00	.00	.00
12 FRANKLIN	.00	102.50	39.75	9.50	.00	.00	.00
14 MITCHELL	.00	92.50	48.75	9.25	.00	.00	.00
4 WILLIAMS	.00	92.50	48.25	8.00	.00	.00	.00
11 CALLAND	.00	101.00	41.25	11.00	.00	.00	.00
13 CUTLER 71	.00	94.75	38.00	8.75	.00	.00	.00
8 FORREST	.00	101.00	52.50	8.25	.00	.00	.00
7 JAMES	.00	89.50	52.00	9.50	.00	.00	.00
GRAND MEAN	.00	95.64	51.38	9.59	.00	.00	.00
STANDARD ERROR OF A VARIETY MEAN	.00	6.04	5.25	.94	.00	.00	.00
COEFFICIENT OF VARIATION	.00%	12.64%	20.43%	19.52%	.00%	.00%	.00%
52 LSD VARIETY MEANS (*****=NS)	.00	*****	14.95	2.67	.00	.00	.00
C O R R E L A T I O N S	(+ - PROB=.05	(+ - PROB=.01)					
YIELD KG/HA	.00	*25	.30+	*14	.00	.00	.00
DAYS TO FLOWER	.00	*.09	.42++	*24	.00	.00	.00
DAYS TO MATURITY	.00	*.00	.28+	*21	.00	.00	.00
NODULE ABUND 1	.00	*.11	.15	*.26+	.00	.00	.00
NODULE ABUND 2	.00	-.00	-.12	-.06	.00	.00	.00
NODULE ACT. 1	.00	*.01	*.08	-.13	.00	.00	.00
NODULE ACT. 2	.00	-.46++	-.02	-.09	.00	.00	.00
PLANT HEIGHT	.00	*.13	.48++	*.46++	.00	.00	.00
LODGING	.00	*.19	.60++	*.38++	.00	.00	.00
SHATTER	1.00	*.00	*.00	*.00	.00	.00	.00
PLANTS HARVEST	.00	1.00	-.08	*.33++	.00	.00	.00
PODS PER PLANT	.00	-.08	1.00	*.08	.00	.00	.00
POD HEIGHT	.00	*.33++	*.08	1.00	*.00	*.00	*.00
100 SEED WEIGHT	.00	*.00	*.00	*.00	1.00	*.00	*.00
QUALITY OF SEED	.00	*.00	*.00	*.00	*.00	1.00	*.00
PERCENT GERM.	.00	*.00	*.00	*.00	*.00	1.00	

TABLE 97 EXPERIMENT 138 YEAR 1973

REGION - ASIA
 SITE - KATHMANDU
 LATITUDE - 27 DEG. 40 MIN. N
 COOPERATORS - M.F. BHARATI, S.K. JAISWAL
 DATE PLANTED - MAY 21, 1978 DATE HARVESTED - SEPTEMBER, 1978
 FERTILIZER USED (KG/HA) - N 25.0, P 25.0, K 25.0
 AMOUNT OF MOISTURE - 1068 MM

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	PLANT HEIGHT		LOGGING
							NODULE ACT. 1	NODULE ACT. 2	
9	DAVIS	1659.08	62.00	128.00	.00	1.25	.00	.00	4.00
6	COBB	1481.96	62.00	147.25	.00	1.00	.00	.00	2.00
13	CUTLER 71	1364.02	54.00	110.00	.00	2.00	.00	.00	2.00
5	RANSOM	1329.85	61.00	128.00	.00	1.75	.00	.00	2.00
15	BRAGG	1303.18	62.00	128.00	.00	1.75	.00	.00	2.00
16	CRAWFORD	1297.76	50.00	120.00	.00	2.25	.00	.00	2.00
14	MITCHELL	1087.30	52.00	120.00	.00	2.25	.00	.00	1.75
7	JAMES	975.61	54.00	120.00	.00	1.00	.00	.00	2.35
4	WILLIAMS	936.02	55.00	110.00	.00	1.25	.00	.00	1.50
8	FORREST	861.01	61.00	128.00	.00	1.50	.00	.00	2.25
3	BOSSIER	764.40	64.00	146.00	.00	1.75	.00	.00	2.25
2	RILLITO	729.73	60.00	120.00	.00	2.25	.00	.00	3.25
12	FRANKLIN	675.13	55.00	110.00	.00	1.25	.00	.00	1.50
10	GASOY 17	540.11	65.00	128.00	.00	1.25	.00	.00	3.75
1	IMPROVED PELICAN	471.76	73.00	151.00	.00	1.00	.00	.00	2.50
11	CALLAND	405.08	54.00	110.00	.00	1.75	.00	.00	1.75
GRAND MEAN									
STANDARD ERROR OF A VARIETY MEAN									
COEFFICIENT OF VARIATION									
5% LSD VARIETY MEANS (*****NS)									
C O R R E L A T I O N S (+ - PROB=.05 + - PROB=.01)									
YIELD KG/HA	1.00	-.19	.03	.00	.10	.00	.01	.00	.01
DAYS TO FLOWER	-.19	1.00	.80++	.00	-.27+	.00	-.12	.36++	.35++
DAYS TO MATURITY	.03	.80++	1.00	.00	-.21	.00	-.16	.55++	.20
NODULE ABUND 1	.00	.00	.00	1.00	.00	.00	.00	.00	.00
NODULE ABUND 2	.10	-.27+	-.21	.00	1.00	.00	-.06	-.12	-.12
NODULE ACT. 1	.00	.00	.00	.00	.00	1.00	.00	.00	.00
NODULE ACT. 2	.01	-.19	-.16	.00	-.06	.00	1.00	-.09	-.32++
PLANT HEIGHT	.00	.36++	.55++	.00	-.12	.00	-.02	1.00	.35++
LOGGING	.01	.35++	.20	.00	-.12	.00	-.32++	.35++	1.00
SHATTER	.04	-.25+	-.10	.00	.35++	.00	-.30+	.03	.07
PLANTS HARVEST	-.06	.28+	-.02	.00	-.26+	.00	.01	-.10	.16
PODS PER POD	.04	-.04	-.02	.00	-.10	.00	-.11	.09	.20
100 SEED WEIGHT	-.02	-.56++	-.33++	.00	.09	.00	.02	.32++	-.14
QUALITY OF SEED	.17	-.64++	-.62++	.00	.24	.00	.22	-.44++	-.36++
PERCENT GERM.	.00	.00	.00	.00	.00	.00	.00	.00	.00

TABLE 97 EXPERIMENT 138 YEAR 1973 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
9	DAVIS	1.00	220.25	19.00	6.00	12.00	*00	*00
6	COBB	1.00	177.00	25.50	17.70	10.00	*00	*00
13	CUTLER 71	1.00	235.25	19.43	16.35	16.25	*00	*00
5	RANSOM	1.00	227.00	12.25	7.65	17.25	*00	*00
15	BRAGG	1.00	253.00	17.35	6.15	13.25	*00	*00
16	CRAWFORD	1.25	142.00	17.60	19.05	15.25	*00	*00
14	MICHELL	2.25	196.50	11.65	16.80	17.50	*00	*00
7	JAMES	1.25	223.75	15.00	23.70	15.75	*00	*00
4	WILLIAMS	1.00	206.50	14.70	14.10	17.25	*00	*00
8	FORREST	1.00	207.50	16.50	8.90	10.50	*00	*00
3	BOSSIER	1.00	168.00	2.50	12.85	10.25	*00	*00
2	RILLITO	1.25	185.00	16.30	22.50	11.25	*00	*00
12	FRANKLIN	1.00	193.75	10.10	18.35	13.50	*00	*00
10	GASOY 17	1.25	221.25	16.90	7.75	11.00	*00	*00
1	IMPROVED PELICAN	1.00	246.25	11.20	6.70	10.00	*00	*00
11	CALLAND	1.00	223.50	10.60	13.50	16.00	*00	*00
GRAND MEAN		1.14	207.91	14.94	13.64	13.59	*00	*00
STANDARD ERROR OF A VARIETY MEAN		.19	12.54	2.01	1.75	.96	*00	*00
COEFFICIENT OF VARIATION		33.20%	12.06%	26.89%	25.59%	14.46%	*00%	*00%
5% LSD VARIETY MEANS (*****NS=NS)		.54	35.71	5.72	4.97	2.74	.00	.00
CORRELATIONS (4 - PROB=.05) 44 - PROB=.01)								
YIELD	KG/H	.04	-.05	-.3644	-.02	.17	*00	*00
DAYS TO FLOWER	-.254	-.534	-.04	-.5244	-.644	*00	*00	*00
DAYS TO MATURITY	-.10	-.02	*.02	-.3344	-.6244	*00	*00	*00
NUDULE ABUND 1	.00	*.00	*.00	*.00	*.00	*00	*00	*00
NUDULE ABUND 2	*.3544	-.2644	-.10	*.09	*.24	*00	*00	*00
NUDULE ACT. 1	*.00	*.00	*.00	*.00	*.00	*00	*00	*00
NUDULE ACT. 2	-.3044	*.01	*.11	*.02	*.22	*00	*00	*00
PLANT HEIGHT	-.08	*.10	*.02	*.3244	*.444	*00	*00	*00
LOGGING	*.07	*.16	*.20	*.13	*.364	*00	*00	*00
SHATTER	*.00	-.12	*.05	*.23	*.24	*00	*00	*00
HARVEST	-.12	*.00	*.07	*.3544	*.07	*00	*00	*00
PLANTS PER PLANT	-.05	*.02	*.50	*.06	*.16	*00	*00	*00
POD HEIGHT	*.23	-.3544	*.05	1.00	*.20	*00	*00	*00
100 SEED WEIGHT	*.21	*.07	*.12	*.29	*.00	*00	*00	*00
QUALITY OF SEED	*.00	*.00	*.00	*.00	*.00	*00	*00	*00
GERM. PERCENT	*.00	*.00	*.00	*.00	*.00	*00	*00	*00

TABLE 98 EXPERIMENT 142 YEAR 1976

REGION - ASIA
 SITE - ISLAMABAD
 LATITUDE - 33 DEG. N
 COOPERATOR - DR. ABDUR-REHMAN KHAN
 DATE PLANTED - JULY 12, 1978
 SOIL PH - 7.1
 FERTILIZER USED (KG/HA) - N 22.0, P 24.6
 AMOUNT OF MOISTURE - 1046 MM

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
6	COBB	2386.45	48.25	128.00	.00	25.00	.00	32.50	65.25	.00
15	BRAGG	2093.62	44.50	116.00	.00	30.00	.00	22.50	81.00	.00
10	GRASOV 17	1941.44	41.25	113.50	.00	20.00	.00	42.50	75.25	.00
9	DAVIS	1941.44	39.75	112.75	.00	17.50	.00	32.50	72.50	.00
4	WILLIAMS	1810.01	34.00	100.00	.00	16.00	.00	32.50	73.25	.00
16	CRAWFORD	1720.09	34.75	100.00	.00	33.00	.00	20.00	73.75	.00
3	BOSSIER	1586.36	45.00	116.50	.00	27.25	.00	25.00	84.00	.00
8	FORREST	1477.99	40.75	115.00	.00	13.00	*.00	40.00	67.25	*.00
5	RANSOM	1408.81	42.25	116.25	.00	32.25	.00	40.00	78.75	*.00
1	IMPROVED PELICAN	1268.16	47.25	116.00	.00	14.00	.00	47.50	66.75	.00
13	CUTLER 71	1231.27	36.50	100.00	.00	18.50	.00	42.50	72.50	*.00
2	RILLITO	1219.74	44.75	116.00	.00	19.25	.00	40.00	81.25	*.00
11	CALLAND	1058.34	37.00	100.00	.00	16.00	.00	40.00	70.00	*.00
7	JAMES	984.56	37.25	100.00	.00	12.25	.00	20.00	68.00	*.00
14	MITCHELL	926.91	37.00	100.00	.00	16.75	.00	35.00	66.00	*.00
12	FRANKLIN	871.57	37.00	100.00	.00	17.50	.00	42.50	72.50	*.00
STANDARD ERROR OF A VARIETY MEAN		1495.42	40.45	109.38	.00	20.52	.00	34.69	75.63	*.00
COEFFICIENT OF VARIATION		175.61	.94	.66	.00	4.15	.00	7.00	2.66	*.00
5% LSD VARIETY MEANS (*****NS)		23.49%	4.64%	1.21%	.00%	40.41%	*.00%	40.36%	7.03%	*.00%
5% LSD VARIETY MEANS (*****NS)		500.21	2.67	1.63	.00	11.81	.00	*****	7.57	*.00
CORRELATIONS (+ - PROB==.05 + + - PROB==.01)										
YIELD KG/HA	1.00	.23	*.46+	.00	.22	.00	-.17	*.41++	*.00	
DAYS TO FLOWER	.23	1.00	*.87++	.00	.15	.00	-.02	*.54++	*.00	
DAYS TO MATURITY	*.46++	*.37+	1.00	.00	.20	.00	*.04	*.54++	*.00	
NODULE ABUND 1	*.00	*.00	*.00	1.00	*.00	*.00	*.00	*.00	*.00	
NODULE ABUND 2	*.22	*.15	*.20	*.00	1.00	*.00	-.15	*.20	*.00	
NODULE ACT. 1	*.00	*.00	*.00	*.00	*.00	1.00	*.00	*.00	*.00	
NODULE ACT. 2	-.17	-.02	.04	*.00	-.15	.00	1.00	-.05	*.00	
PLANT HEIGHT	*.41++	*.54++	*.00	*.00	*.20	*.00	-.05	1.00	*.00	
LOGGING	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	
SHATTER	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	
PLANTS HARVEST	*.17	-.24	-.27	*.00	-.29+	*.00	-.09	*.00	*.00	
PODS PER PLANT	*.22	*.14	*.15	*.00	-.01	*.00	-.28+	*.31+	*.00	
POD HEIGHT	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	
100 SEED WEIGHT	-.11	-.61++	-.52++	*.00	-.02	*.00	-.04	-.40++	*.00	
QUALITY OF SEED	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	
PERCENT GERM.	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	

TABLE 98 EXPERIMENT 142 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
6 COBB		.00	216.75	29.75	.00	15.05	.00	.00
15 BRAGG		.00	200.50	47.25	.00	16.13	.00	.00
10 GASOY 17		.00	230.50	43.50	.00	17.08	.00	.00
9 DAVIS		.00	215.50	44.00	.00	17.13	.00	.00
4 WILLIAMS		.00	193.50	42.25	.00	19.15	.00	.00
16 CRAWFORD		.00	205.50	39.25	.00	16.30	.00	.00
3 BOSSIER		.00	188.25	55.50	.00	13.70	.00	.00
8 FORREST		.00	169.50	41.25	.00	15.00	.00	.00
5 RANSOM		.00	158.50	31.00	.00	17.13	.00	.00
1 IMPROVED PELICAN		.00	208.75	51.25	.00	11.73	.00	.00
CUTLER 71		.00	237.75	32.50	.00	17.50	.00	.00
13 RILLITO		.00	181.75	32.50	.00	17.28	.00	.00
2 CALLAND		.00	227.25	35.00	.00	17.00	.00	.00
11 JAMES		.00	242.75	38.50	.00	18.35	.00	.00
7 MITCHELL		.00	199.75	39.75	.00	16.90	.00	.00
14 FRANKLIN		.00	205.50	34.00	.00	17.53	.00	.00
GRAND MEAN		.00	205.08	40.20	.00	16.45	.00	.00
STANDARD ERROR OF A VARIETY MEAN		.00	12.48	5.94	.00	*.43	.00	.00
COEFFICIENT OF VARIATION		.00%	12.17%	22.54%	.00%	5.18%	.00%	.00%
5% LSD VARIETY MEANS (*****=NS)		.00	35.55	*****	.00	1.21	.00	.00
CORRELATIONS (+ - PROB=.05 + - PROB=.01)								
YIELD KG/HA		.00	*.17	*.22	.00	-.11	.00	.00
DAYS TO FLOWER		.00	-.24	.14	.00	-.61+	.00	.00
DAYS TO MATURITY		.00	-.27+	.15	.00	-.52+	.00	.00
NODULE ABUND 1		.00	-.00	.00	.00	.00	.00	.00
NODULE ABUND 2		.00	-.29+	-.01	.00	-.02	.00	.00
NODULE ACT. 1		.00	-.00	.00	.00	.00	.00	.00
NODULE ACT. 2		.00	-.05	-.28+	.00	-.04	.00	.00
PLANT HEIGHT		.00	-.09	*.31+	.00	-.40+	.00	.00
LOGGING		.00	-.00	.00	.00	.00	.00	.00
SHATTER	1.00		.00	.00	.00	.00	.00	.00
PLANTS HARVEST		.00	1.00	-.18	.00	.11	.00	.00
PODS PER PLANT		.00	-.18	1.00	.00	-.29+	.00	.00
POD HEIGHT		.00	-.00	.00	1.00	.00	.00	.00
100 SEED WEIGHT		.00	.11	-.29+	.00	1.00	.00	.00
QUALITY OF SEED		.00	.00	.00	.00	1.00	.00	.00
PERCENT GERM.		.00	.00	.00	.00	.00	1.00	.00

TABLE 99 EXPERIMENT 146 YEAR 1978

REGION - ASIA
 SITE - LAHORE
 LATITUDE - 31 DEG. 30 MIN. N
 COOPERATORS - J.R. LOCKMAN, R.J. TROEDSON
 DATE PLANTED - JUNE 7, 1978
 SOIL TYPE - ALLUVIAL SILT LOAM
 FERTILIZER USED (KG/HA) - N 20.0, P 32.0
 AMOUNT OF MOISTURE - 337 MM
 NUMBER OF IRRIGATIONS - 3
 COUNTRY - PAKISTAN
 ELEVATION - 230 M
 LONGITUDE - 74 DEG. 20 MIN. E
 DATE HARVESTED - OCTOBER, 1978

TABLE 99 EXPERIMENT 146 YEAR 1778 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
3 BOSSIER	.00	142.25	27.55	.00	.00	.00	.00	.00	42.8	20.1
4 WILLIAMS	.00	117.25	19.95	.00	.00	.00	.00	.00	45.4	19.1
12 FRANKLIN	.00	132.25	19.30	.00	.00	.00	.00	.00	44.3	17.5
14 MITCHELL	.00	93.50	23.35	.00	.00	.00	.00	.00	43.4	18.6
5 RANSOM	.00	133.75	18.50	.00	.00	.00	.00	.00	44.8	16.5
9 DAVIS	.00	139.25	23.50	.00	.00	.00	.00	.00	44.3	15.9
8 FOREST	.00	107.25	16.75	.00	.00	.00	.00	.00	42.1	19.5
16 CRAWFORD	.00	79.25	19.10	.00	.00	.00	.00	.00	44.3	16.3
11 CALLAND	.00	135.25	14.48	.00	.00	.00	.00	.00	46.3	14.7
15 BRAGG	.00	125.75	23.05	.00	.00	.00	.00	.00	42.8	19.7
10 GASOY 17	.00	121.25	17.35	.00	.00	.00	.00	.00	41.3	18.4
2 RILLITO	.00	81.75	17.80	.00	.00	.00	.00	.00	43.3	18.0
1 IMPROVED FELICAN	.00	111.75	11.60	.00	.00	.00	.00	.00	45.4	16.3
13 CUTLER 71	.00	85.25	12.20	.00	.00	.00	.00	.00	44.7	18.0
6 COBB	.00	67.50	7.80	.00	.00	.00	.00	.00	47.9	14.7
7 JAMES	.00	115.25	4.75	.00	.00	.00	.00	.00	44.6	17.2
GRAND MEAN	.00	111.78	17.31	.00	.00	.00	.00	.00	3.83	.00
STANDARD ERROR OF A VARIETY MEAN	.00	9.67	2.34	.00	.00	.00	.00	.00	*.22	.00
COEFFICIENT OF VARIATION	.00%	17.30%	26.98%	.00%	.00%	.00%	.00%	.00%	11.41%	.00
5% LSD VARIETY MEANS (*****NS)	.00	27.54	6.65	.00	.00	.00	.00	.00	.62	.00
C O R R E L A T I O N S (+ = PROB=.05 ++ = PROB=.01)										
YIELD KG/HA	.00	*35++	*65++	.00	.00	.00	.00	.00	*.19	.00
DAYS TO FLOWER	.08	*.08	*.10	.00	.00	.00	.00	.00	*.76++	.00
DAYS TO MATURITY	.00	*.11	*.10	.00	.00	.00	.00	.00	*.72++	.00
NODULE ABUND 1	.00	*.00	*.00	.00	.00	.00	.00	.00	*.00	.00
NODULE ABUND 2	.00	*.00	*.00	.00	.00	.00	.00	.00	*.00	.00
NODULE ACT. 1	.00	*.00	*.00	.00	.00	.00	.00	.00	*.00	.00
NODULE ACT. 2	.00	*.00	*.00	.00	.00	.00	.00	.00	*.00	.00
PLANT HEIGHT	.00	*.00	*.00	.00	.00	.00	.00	.00	*.00	.00
LODGING	.00	*.00	*.00	.00	.00	.00	.00	.00	*.00	.00
SHATTER	1.00	*.00	*.00	.00	.00	.00	.00	.00	*.00	.00
PLANTS HARVEST	.00	1.00	*37++	.00	.00	.00	.00	.00	*.03	.00
PODS PER PLANT	.00	*37++	1.00	.00	.00	.00	.00	.00	*.22	.00
POD HEIGHT	.00	*.00	*.00	1.00	.00	.00	.00	.00	*.00	.00
100 SEED WEIGHT	.00	*.00	*.00	.00	.00	1.00	.00	.00	*.00	.00
QUALITY OF SEED	.00	-.03	-.22	.00	.00	.00	.00	.00	1.00	.00
PERCENT GERM.	.00	-.00	-.00	.00	.00	.00	.00	.00	1.00	.00

TABLE 100 EXPERIMENT 201 YEAR 1978

REGION - ASIA
 SITE - LAHORE
 LATITUDE - 31 DEG. 30 MIN. N
 COOPERATORS - J.R. LOCHMAN, R.J. TROEDSON
 DATE PLANTED - MARCH 20, 1978
 SOIL TYPE - ALLUVIAL SILT LOAM
 FERTILIZER USED (KG/HA) - N 20.0, P 22.0
 AMOUNT OF MOISTURE - 98 MM
 NUMBER OF IRRIGATIONS - 8

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LONGING	CORRELATIONS	
											(+ - PROB=.05	(+ - PROB=.01)
1	WILLIAMS	2459.09	33.00	89.50	2.25	0.00	0.00	0.00	43.23	.00		
9	ELF	2419.27	33.00	93.50	1.50	0.00	0.00	0.00	26.28	.00		
10	UNION	2163.78	33.00	94.50	1.50	0.00	0.00	0.00	46.20	.00		
4	MICHELL	1946.82	36.00	112.00	1.75	0.00	0.00	0.00	59.20	.00		
2	FRANKLIN	1902.65	33.00	111.75	1.75	0.00	0.00	0.00	49.70	.00		
7	HARCOR	1843.02	31.00	90.75	1.25	0.00	0.00	0.00	29.43	.00		
11	CORSOY	1816.26	28.00	91.00	1.50	0.00	0.00	0.00	26.08	.00		
6	STEELE	1731.99	31.00	83.50	2.00	0.00	0.00	0.00	27.85	.00		
3	CUTLER 71	1659.02	36.00	113.75	2.50	0.00	0.00	0.00	54.10	.00		
5	ALTONA	1530.21	28.00	75.00	3.50	0.00	0.00	0.00	27.35	.00		
8	HODGSON	1380.94	31.00	90.00	2.75	0.00	0.00	0.00	24.98	.00		
STANDARD ERROR OF A VARIETY MEAN		1895.73	32.09	95.02	2.02	0.00	0.00	0.00	37.67	.00		
COEFFICIENT OF VARIATION		157.46	.25	1.53	.43	0.00	0.00	0.00	1.80	.00		
5% LSD VARIETY MEANS (*****=NS)		16.61%	1.53%	3.21%	42.47%	0.00%	0.00%	0.00%	9.55%	.00%		
		454.79	.71	4.40	1.24	0.00	0.00	0.00	5.19	.00		
C O R R E L A T I O N S												
YIELD KG/HA		1.00	.27	.15	-.394+	0.00	0.00	0.00				
DAYS TO FLOWER		.27	1.00	.784+	-.13	0.00	0.00	0.00				
DAYS TO MATURITY		.15	-.784+	1.00	-.15	0.00	0.00	0.00				
NODULE ABUND 1		-.394+	-.13	-.15	1.00	0.00	0.00	0.00				
NODULE ABUND 2		.00	.00	.00	1.00	0.00	0.00	0.00				
NODULE ACT. 1		.00	.00	.00	.00	1.00	0.00	1.00				
NODULE ACT. 2		.00	.00	.00	.00	.00	1.00	1.00				
PLANT HEIGHT		.17	.794+	.744+	-.13	0.00	0.00	0.00				
LOGGING		.00	.00	.00	.00	0.00	0.00	0.00				
SHATTER		.00	.00	.00	.00	0.00	0.00	0.00				
PLANTS HARVEST		.25	.06	.15	-.09	0.00	0.00	0.00				
PODS PER PLANT		.15	.26	.20	-.434+	0.00	0.00	0.00				
POD HEIGHT		.00	.00	.00	.00	0.00	0.00	0.00				
100 SEED WEIGHT		.13	-.16	-.314	.17	0.00	0.00	0.00				
QUALITY OF SEED		-.17	.534+	.724+	.07	0.00	0.00	0.00				
PERCENT GERM.		.01	-.414+	-.354+	-.10	0.00	0.00	0.00				

TABLE 100 EXPERIMENT 201 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
1 WILLIAMS	.00	142.25	15.45	.00	14.15	2.25	3.50	42.3	23.1	
9 ELF	.00	144.25	13.65	.00	14.23	2.00	2.50	43.0	23.4	
10 UNION	.00	119.25	19.95	.00	14.63	2.25	1.00	43.3	22.2	
4 MITCHELL	.00	141.75	19.70	.00	14.08	3.50	2.00	43.0	20.4	
2 FRANKLIN	.00	148.25	15.35	.00	12.68	5.00	.25	40.7	22.6	
7 HARCOR	.00	120.75	24.48	.00	13.30	2.00	7.75	43.0	21.8	
11 CORSOY	.00	125.50	14.15	.00	13.95	2.00	6.50	42.0	22.2	
6 STEELE	.00	92.75	16.60	.00	14.70	2.50	.50	42.1	22.8	
3 CUTLER 71	.00	130.00	18.20	.00	13.43	3.75	1.75	44.1	22.6	
5 ALTONA	.00	161.50	12.50	.00	14.35	2.00	5.75	42.1	20.6	
8 HONGSON	.00	111.00	11.05	.00	15.08	2.75	2.75	42.4	23.4	
GRAND MEAN	.00	130.66	16.46	.00	14.05	2.73	3.05			
STANDARD ERROR OF A VARIETY MEAN	.00	10.76	2.45	.00	*.44	*.19	*.10			
COEFFICIENT OF VARIATION	.00%	16.47%	29.76%	.00%	6.19%	14.13%	72.53%			
5% LSD VARIETY MEANS (*****NS=NS)	.00	31.07	7.07	.00	1.26	.56	3.19			
C O R R E L A T I O N S	(+ - PROB=.05	(+ - PROB=.01)								
YIELD KG/HA	.00	*.25	*.15	.00	*.13	-.17	*.01			
DAYS TO FLOWER	.00	*.06	*.26	.00	-.16	*.53+	-.41++			
DAYS TO MATURITY	.00	*.15	*.20	.00	-.31+	*.72++	-.35+			
NODULE ABUND 1	.00	-.09	-.43++	.00	*.17	*.07	-.10			
NODULE ABUND 2	.00	.00	.00	.00	*.00	*.00	*.00			
NODULE ACT. 1	.00	.00	.00	.00	*.00	*.00	*.00			
NODULE ACT. 2	.00	.00	.00	.00	*.00	*.00	*.00			
PLANT HEIGHT	.00	*.18	*.28	.00	-.30+	*.64++	-.32+			
LODGING	.00	.00	.00	.00	*.00	*.00	*.00			
SHATTER	1.00	.00	.00	.00	*.00	*.00	*.00			
PLANTS HARVEST	.00	1.00	-.06	.00	*.09	*.13	*.31+			
PODS PER PLANT	.00	-.06	1.00	.00	-.25	*.02	*.10			
POD HEIGHT	.00	.00	.00	1.00	*.00	*.00	*.00			
100 SEED WEIGHT	.00	.09	-.25	.00	1.00	-.35+	*.08			
QUALITY OF SEED	.00	.13	*.02	.00	-.35+	1.00	-.41++			
PERCENT GERM.	.00	.31+	.10	.00	*.08	-.41++	1.00			

TABLE 101 EXPERIMENT 217 YEAR 1978

REGION - ASIA
 SITE - LAHORE
 LATITUDE - 31 DEG. 19 MIN. N
 COOPERATOR - J.R. LOCKMAN
 DATE PLANTED - MARCH 22, 1979
 SOIL TYPE - FINE SILT LOAM (ALLUVIAL)
 FERTILIZER USED (KG/HA) - N 25.0
 AMOUNT OF MOISTURE - 702 MM
 NUMBER OF IRRIGATIONS - 7 (350 MM)

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LONGING	CORRELATIONS								
											(+ - PROB=.05	(+ - PROB=.01)							
13	UNION	2610.07	35.00	96.00	2.00	.00	70.00	.00	43.27	.00									
2	CALLAND	1605.68	33.00	107.00	2.67	.00	71.67	.00	40.33	.00									
3	FRANKLIN	1560.40	37.67	107.00	4.00	.00	78.33	.00	49.27	.00									
11	ELF	1272.05	33.00	91.00	2.33	.00	80.00	.00	17.60	.00									
6	ALTONA	1200.65	31.00	76.00	3.67	.00	91.67	.00	30.07	.00									
12	COLUMBUS	1170.65	35.00	123.00	3.00	.00	61.67	.00	50.53	.00									
5	MICHELL	1125.09	35.00	107.00	4.00	.00	88.33	.00	53.93	.00									
1	WILLIAMS	959.94	33.67	96.33	2.67	.00	63.33	.00	40.13	.00									
9	HARCOR	939.52	31.00	83.33	2.00	.00	85.00	.00	25.27	.00									
10	HODGSON	835.07	31.00	83.67	2.33	.00	60.00	.00	24.00	.00									
4	CUTLER 71	828.96	34.33	107.00	3.67	.00	66.67	.00	41.27	.00									
14	CORSOY	809.93	31.00	86.33	2.67	.00	61.67	.00	21.53	.00									
16	CRAWFORD	675.05	36.00	117.67	2.67	.00	73.33	.00	47.53	.00									
7	SWIFT	608.10	33.00	76.00	3.33	.00	76.67	.00	23.20	.00									
15	EVANS	601.16	31.00	83.67	3.00	.00	65.00	.00	20.67	.00									
8	STEELE	445.59	31.00	83.67	3.67	.00	75.00	.00	23.80	.00									
		GRAND MEAN	1077.99	33.23	95.29	2.98	.00	73.02	.00	34.52	.00								
		STANDARD ERROR OF A VARIETY MEAN	287.80	.73	1.42	.43	.00	7.17	.00	2.13	.00								
		COEFFICIENT OF VARIATION	46.24%	3.80%	2.58%	25.17%	.00%	17.01%	.00%	10.67%	.00%								
		5% LSD VARIETY MEANS (*****=NS)	831.23	2.11	4.10	1.25	.00	*****	.00	6.14	.00								
-200-																			
C O R R E L A T I O N S																			
YIELD	KG/HA	1.00	.29+	.18	-.28	.00	.17	.00											
DAYS TO FLOWER		*29+	1.00	*71++	*.15	.00	-.07	.00											
DAYS TO MATURITY		*18	*71++	1.00	*.09	.00	-.15	.00											
NODULE ABUND 1		-28	*15	*.09	1.00	.00	*.16	.00											
NODULE ABUND 2		*00	*00	*00	*00	1.00	*.00	.00											
NODULE ACT. 1		*17	-.07	-.15	*.16	.00	1.00	.00											
NODULE ACT. 2		*00	*00	*00	*.00	.00	*.00	.00											
PLANT HEIGHT		*35+	*74++	*80++	*.17	.00	*.03	.00											
LOGGING		*00	*00	*00	*00	.00	*.00	.00											
SHATTER		*00	*09	-.04	-.39++	.00	*.16	.00											
PLANTS HARVEST		*63++	*53++	*55++	*.14	.00	-.04	.00											
PODS PER PLANT		*20	*.03	-.04	*.13	.00	*.08	.00											
POD HEIGHT		*16	*00	*00	*00	.00	*.00	.00											
100 SEED WEIGHT		*00	*00	*00	*00	.00	*.00	.00											
QUALITY OF SEED GERM.		*00	*00	*00	*00	.00	*.00	.00											
PERCENT		*00	*00	*00	*00	.00	*.10	.00											

TABLE 101 EXPERIMENT 217 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
13	UNION	1.00	106.00	14.87	5.53	.00	.00	.00	42.6	23.8
2	CALLAND	1.00	104.00	20.00	5.80	.00	.00	.00	42.1	20.7
3	FRANKLIN	1.00	84.67	17.67	6.33	.00	.00	.00	41.1	23.2
11	ELF	1.00	89.00	9.40	3.60	.00	.00	.00	41.0	23.7
6	ALTONA	1.00	106.33	14.00	7.40	.00	.00	.00	39.3	21.3
12	COLUMBUS	1.00	77.67	16.27	5.87	.00	.00	.00	42.7	21.1
5	MITCHELL	1.00	57.33	22.13	5.07	.00	.00	.00	41.6	21.8
1	WILLIAMS	1.00	61.33	16.40	5.53	.00	.00	.00	40.6	25.7
9	HARCOR	1.00	88.00	9.80	4.73	.00	.00	.00	39.0	21.7
10	HODGSON	1.00	81.00	11.20	5.33	.00	.00	.00	40.7	24.5
4	CUTLER 71	1.00	31.33	19.00	6.07	.00	.00	.00	42.1	24.0
14	CORSOY	1.00	75.00	10.40	4.13	.00	.00	.00	41.8	22.5
16	CRAWFORD	1.00	82.33	16.60	3.87	.00	.00	.00	42.5	21.5
7	SWIFT	1.00	69.00	11.73	5.53	.00	.00	.00	38.7	24.4
15	EVANS	1.00	61.67	10.07	5.27	.00	.00	.00	40.7	22.6
8	STEELE	1.00	34.00	10.33	4.33	.00	.00	.00	41.5	23.2
GRAND MEAN		1.00	75.54	14.37	5.27	.00	.00	.00	.00	.00
STANDARD ERROR OF A VARIETY MEAN		*.00	19.40	2.26	.83	.00	.00	.00	.00	.00
COEFFICIENT OF VARIATION		*.00%	44.48%	27.22%	27.23%	*.00%	*.00%	*.00%	*.00%	*.00%
5% LSD VARIETY MEANS (*****=NS)		.00	*****	6.52	*****	.00	.00	.00	.00	.00
CORRELATIONS		(+ - PROB=.05		(+ - PROB=.01)						
YIELD	KG/HA	.00	*.63++	*.20	.16	.00	.00	.00	.00	.00
DAYS TO FLOWER		.00	*.09	*.53++	-.03	.00	.00	.00	.00	.00
DAYS TO MATURITY		.00	-.04	*.55++	-.04	.00	.00	.00	.00	.00
NODULE ABUND 1		.00	-.39++	*.14	.13	.00	.00	.00	.00	.00
NODULE ABUND 2		.00	*.00	*.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 1		.00	*.16	-.04	.08	.00	.00	.00	.00	.00
NODULE ACT. 2		.00	*.00	*.00	.00	.00	.00	.00	.00	.00
PLANT HEIGHT		.00	*.10	*.72++	.25	.00	.00	.00	.00	.00
LODGING		.00	*.00	*.00	.00	.00	.00	.00	.00	.00
SHATTER		1.00	*.00	*.00	.00	.00	.00	.00	.00	.00
PLANTS HARVEST		.00	1.00	*.02	*.09	.00	.00	.00	.00	.00
PODS PER PLANT		.00	*.02	1.00	*.15	.00	.00	.00	.00	.00
POD HEIGHT		.00	*.09	*.15	1.00	.00	.00	.00	.00	.00
100 SEED WEIGHT		.00	*.00	*.00	*.00	1.00	.00	.00	.00	.00
QUALITY OF SEED		.00	*.00	*.00	*.00	*.00	1.00	.00	.00	.00
PERCENT GERM.		.00	*.00	*.00	*.00	*.00	*.00	1.00	.00	.00

TABLE 102 EXPERIMENT 118 YEAR 1978

REGION - ASIA
 SITE - TANDO JAM
 LATITUDE - 25 DEG. 2 MIN N
 COOPERATORS - A. H. CHAUDHRY, M. A. JALEEL, N. AHMED & A. H. SOOMRO
 DATE PLANTED - JUNE 6, 1978
 SOIL TYPE - SANDY LOAM, PH 7.9
 FERTILIZER USED (KG/HA) - N 84.0, P 99.0
 AMOUNT OF MOISTURE - 344 MM
 NUMBER OF IRRIGATIONS - 4
 SUBSTITUTE VARIETY - HAMETON 266A
 COUNTRY - PAKISTAN
 ELEVATION - 19 M
 LONGITUDE - 63 DEG. 38 MIN E
 DATE HARVESTED - OCTOBER, 1978

TABLE 102 EXPERIMENT 118 YEAR 1978 (CONTINUED)

EXPERIMENT 11.8 YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	FOD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
6	HAMPTON 266A	1.00	55.75	97.25	8.45	16.05	3.00	8.00
5	RANSOM	1.00	94.00	36.50	8.75	16.60	2.00	21.50
10	GASOY 17	1.75	89.75	66.00	8.13	13.88	1.75	27.75
15	FRAGG	1.00	80.50	49.75	7.65	13.23	2.00	23.75
3	BOSSIER	1.00	69.75	75.25	10.10	13.05	2.00	21.50
7	JAMES	1.00	93.75	43.75	9.80	16.33	2.00	25.00
1	IMPROVED FELICAN	1.50	99.75	83.00	14.20	11.58	2.00	26.75
2	RILLITO	1.00	97.25	67.00	12.70	12.00	2.00	31.75
9	DAVIS	1.00	98.50	48.00	10.40	16.13	1.75	33.25
11	CAILAND	1.00	129.00	42.25	7.55	17.63	3.00	30.00
16	COLUMBUS	1.00	83.25	40.75	8.65	14.68	2.00	25.75
8	FORREST	1.00	50.75	45.00	6.45	13.83	4.00	7.50
14	MITCHELL	1.00	67.25	43.75	6.60	16.05	2.75	12.00
4	WILLIAMS	1.00	112.00	41.00	6.35	15.80	1.00	14.75
13	CUTLER 71	1.00	98.25	34.00	8.95	17.53	2.00	21.50
12	FRANKLIN	1.00	98.25	39.75	7.45	15.03	1.75	17.25
	GRAND MEAN	1.08	88.61	53.31	8.93	14.96	2.19	21.75
	STANDARD ERROR OF A VARIETY MEAN	.09	10.00	7.24	1.00	.45	.13	4.30
	COEFFICIENT OF VARIATION	17.37%	22.56%	27.15%	22.37%	6.00%	11.55%	39.51%
	5% LSD VARIETY MEANS (*****=NS)	.27	28.47	20.61	2.85	1.28	.36	1.2.24
	C O R R E L A T I O N S	(+ - PROB=.05 ++ - PROB=.01)						
	YIELD	.22	*.25+	*.44+	*.17	-.14	+.04	+.11
	DAYS TO FLOWER	.35++	-.18	*.66++	*.52++	-.54++	-.01	-.09
	DAYS TO MATURITY	.33++	-.30+	*.65++	*.37++	-.47++	.07	:10
	NODULE ABUND 1	.00	-.00	-.00	-.00	-.00	.00	.00
	NODULE ABUND 2	.14	*.16	*.08	-.04	-.23	.03	-.07
	NODULE ACT. 1	.00	*.00	*.00	*.00	*.00	*.00	*.00
	NODULE ACT. 2	.00	*.00	*.00	*.00	*.00	*.00	*.00
	PLANT HEIGHT	.26+	*.29+	*.38++	*.63++	-.37++	-.17	.22
	LOGGING	.26+	*.25+	.15	*.34++	-.04	-.07	:10
	SHATTER	1.00	*.08	*.35++	.18	-.24	-.08	*.28+
	HARVEST	.08	1.00	-.14	*.16	*.17	-.44++	*.36++
	PLANTS PER PLANT	.35++	-.14	1.00	*.30+	-.34++	*.11	*.06
	FOD HEIGHT	.18	*.16	*.30+	1.00	-.45++	-.21	*.29+
	100 SEED WEIGHT	-.24	*.17	-.34++	-.45++	1.00	*.06	-.04
	QUALITY OF SEED	-.08	-.44++	*.11	-.21	*.06	1.00	-.29+
	PERCENT GERM.	.28+	*.36++	*.06	*.29+	-.04		1.00

TABLE 102a EXPERIMENT 173 YEAR 1773

REGION - ASIA
 STATE MAHA ILLUFFALLA
 LATITUDE - 3 DEG. N.
 COOPERATOR F.W.S.M. SAMARASINGHE
 DATE PLANTED - MAY 3, 1978
 SOIL TYPE - SANDY CLAY LOAM, FH 6,9
 FERTILIZER USED (KG/HA) - N 20.0, P 17.6, K 49.8
 AMOUNT OF MOISTURE - 130 MM
 NUMBER OF IRRIGATIONS - 10
 LOCAL VARIETIES - NUWARA ELIYA, FB-1

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG./HA	DAYS TO FLOWER	DAYS TO MATURITY	MODULE ABUND 1	MODULE ABUND 2	MODULE ACT. 1	MODULE ACT. 2	PLANT HEIGHT		
									ACT.	ACT.	
11	KAHALA	4471.77	21.75	99.75	*.00	*.00	*.00	*.00	36.20	1.00	
14	WILLIAMS	4249.57	21.50	94.00	*.00	*.00	*.00	*.00	37.63	1.00	
8	CARIBE	4110.70	21.50	88.00	*.00	*.00	*.00	*.00	35.05	1.00	
4	HARDEE LS	3944.05	21.50	90.75	*.00	*.00	*.00	*.00	35.78	1.00	
12	RILLITO	3888.50	23.00	91.75	*.00	*.00	*.00	*.00	34.25	1.00	
1	CH-3	3666.30	17.50	83.25	*.00	*.00	*.00	*.00	48.23	1.00	
6	TAC-2	3610.75	21.75	88.00	*.00	*.00	*.00	*.00	32.73	1.00	
13	BOSSIER	3555.20	29.00	98.00	*.00	*.00	*.00	*.00	63.70	1.00	
3	SJ-2	3499.65	22.25	89.00	*.00	*.00	*.00	*.00	34.75	1.00	
5	ORBA	3416.32	23.00	83.25	*.00	*.00	*.00	*.00	37.20	1.00	
16	PB-1	3388.55	28.00	92.00	*.00	*.00	*.00	*.00	59.43	1.00	
7	TUNIA	3360.77	39.75	108.75	*.00	*.00	*.00	*.00	70.00	1.00	
9	JUPITER	3249.67	20.00	78.00	*.00	*.00	*.00	*.00	45.10	1.00	
10	IMPROVED PELICAN	3166.35	18.00	78.00	*.00	*.00	*.00	*.00	42.10	1.00	
15	NUWARA ELIYA	3083.02	40.00	103.50	*.00	*.00	*.00	*.00	79.50	1.00	
2	UFU-1	3027.47	17.75	76.25	*.00	*.00	*.00	*.00	46.63	1.00	
GRAND MEAN											
STANDARD ERROR OF A VARIETY MEAN											
COEFFICIENT OF VARIATION											
5% LSD VARIETY MEANS (*****NS=NS)											
C O R R E L A T I O N S											
	YIELD KG./HA	1.00	-.16	-.13	*.00	*.00	*.00	*.00	*.15	*.00	
	DAYS TO FLOWER	-.16	1.00	*.814+	*.00	*.00	*.00	*.00	*.724	*.00	
	DAYS TO MATURITY	*.13	*.814+	1.00	*.00	*.00	*.00	*.00	*.484+	*.00	
	MODULE ABUND 1	*.00	*.00	*.00	1.00	*.00	*.00	*.00	*.00	*.00	
	MODULE ABUND 2	*.00	*.00	*.00	*.00	1.00	*.00	*.00	*.00	*.00	
	MODULE ACT. 1	*.00	*.00	*.00	*.00	*.00	1.00	*.00	*.00	*.00	
	MODULE ACT. 2	*.00	*.00	*.00	*.00	*.00	*.00	1.00	*.00	*.00	
	PLANT HEIGHT	-.15	*.724+	*.484+	*.00	*.00	*.00	*.00	*.00	*.00	
	LOGGING	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	
	SHATTER	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	
	PLANTS HARVEST	*.13	*.324+	*.16	*.00	*.00	*.00	*.00	*.544+	*.00	
	PODS PER PLANT	.21	*.324+	*.374+	*.00	*.00	*.00	*.00	*.314	*.00	
	POD HEIGHT	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	
100	SEED QUALITY	-.02	*.14	*.07	*.00	*.00	*.00	*.00	*.12	*.00	
SEED PERCENT	-.15	-.17	-.314	*.00	*.00	*.00	*.00	-.09	*.00		
GERM.	-.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00		

- 202a -

TABLE 102a EXPERIMENT 173 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
11	KAHALA	1.00	297.75	31.75	*.00	17.88	1.00 *00
14	WILLIAMS	1.00	302.25	30.25	*.00	18.03	1.25 *00
8	CARIBE	1.00	297.25	34.75	*.00	17.83	1.00 *00
4	HARDEE LS	1.00	227.50	27.75	*.00	18.65	1.00 *00
12	RILLITO	1.00	273.75	22.50	*.00	17.30	1.00 *00
1	CH-3	1.00	224.50	23.00	*.00	12.40	1.00 *00
6	TAC-2	1.00	219.50	26.50	*.00	10.95	1.00 *00
13	BOSSIER	1.00	276.50	32.25	*.00	17.55	1.00 *00
3	SJ-2	1.00	187.75	32.25	*.00	17.53	1.00 *00
5	ORBA	1.00	273.50	23.25	*.00	16.30	1.00 *00
16	PB-1	1.00	268.25	36.75	*.00	13.65	1.00 *00
7	TUNIA	1.00	292.00	29.00	*.00	18.60	1.00 *00
9	JUPITER	1.00	273.00	21.75	*.00	18.53	1.50 *00
10	IMPROVED PELICAN	1.00	291.00	23.50	*.00	18.48	1.25 *00
15	NUWARA ELIYA	1.00	329.75	37.50	*.00	17.93	1.00 *00
2	UFV-1	1.00	267.50	21.25	*.00	18.35	1.00 *00
	GRAND MEAN	1.00	270.11	29.25	*.00	16.90	1.06 *00
	STANDARD ERROR OF A VARIETY MEAN	.00	17.93	3.48	*.00	*.64	*.14 *00
	COEFFICIENT OF VARIATION	.00%	1.327%	23.82%	*.00%	7.60%	21.62% *00%
	5% LSD VARIETY MEANS (*****=NS)	.00	51.06	9.92	*.00	1.83	***** *00
	CORRELATIONS		(4 - PROB=.05)	(4 - PROB=.01)			
	YIELD KG/Ha	*.00	*.13	*.21	*.00	-.02	*.15 *00
	DAYS TO FLOWER	*.00	*.324+	*.324+	*.00	*.14	-.17 *00
	DAYS TO MATURITY	*.00	*.16	*.374+	*.00	*.07	-.314 *00
	NOODLE ABUND 1	*.00	*.00	*.00	*.00	*.00	*.00
	NOODLE ABUND 2	*.00	*.00	*.00	*.00	*.00	*.00
	NOODLE ACT. 1	*.00	*.00	*.00	*.00	*.00	*.00
	NOODLE ACT. 2	*.00	*.00	*.00	*.00	*.00	*.00
	PLANT HEIGHT	*.00	*.514+	*.314+	*.00	*.12	*.09 *00
	LODGING	*.00	*.00	*.00	*.00	*.00	*.00
	SHATTER	1.00	*.00	*.00	*.00	*.00	*.00
	PLANTS HARVEST	*.00	1.00	*.08	*.00	*.304	*.02 *00
	PODS PER PLANT	*.00	*.08	1.00	*.00	-.15	-.11 *00
	POD HEIGHT	*.00	*.00	1.00	*.00	*.00	*.00
	100 SEED WEIGHT	*.00	*.304	*.15	*.00	1.00	*.10 *00
	QUALITY OF SEED PERCENT	*.00	*.02	-.11	*.00	*.10	1.00 *00
	GERM.	*.00	*.00	*.00	*.00	*.00	1.00

TABLE 103 EXPERIMENT 43 YEAR 1978

REGION - ASIA
 SITE - SRISAMRONG
 LATITUDE - 17 DEG. 12 MIN. N
 COOPERATOR - ARWOOTH NALAMFANG
 DATE PLANTED - SEPTEMBER 6, 1978 DATE HARVESTED - DECEMBER, 1978
 SOIL TYPE - KAMFAENG SAN SERIES, PH 7.0
 FERTILIZER USED (KG/HA) - N 18.8, P 25.0, K 31.0
 NUMBER OF IRRIGATIONS - 1

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1		NODULE ABUND 2		PLANT HEIGHT		LODGING	
					NODULE ACT. 1	NODULE ACT. 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING		
7	TUNIA	2646.78	35.00	80.25	.00	.00	.00	.00	58.50	1.00		
5	ORBA	2605.10	35.25	71.75	.00	.00	.00	.00	75.35	2.00		
13	WILLIAMS	2604.69	35.00	70.00	.00	.00	.00	.00	62.70	1.00		
11	RILLITO	2563.43	35.50	76.00	.00	.00	.00	.00	58.80	2.00		
15	COBB	2470.91	35.00	73.00	.00	.00	.00	.00	78.60	1.00		
10	IMPROVED PELICAN	2450.49	35.00	77.00	.00	.00	.00	.00	61.85	3.50		
3	SJ-2	2436.74	35.00	74.25	.00	.00	.00	.00	66.10	1.00		
14	RANSOM	2434.24	35.00	72.50	.00	.00	.00	.00	35.33	1.00		
12	BOSSIER	2402.56	35.25	77.75	.00	.00	.00	.00	61.95	3.75		
6	IAC-2	2251.70	35.00	80.50	.00	.00	.00	.00	74.05	4.75		
1	CH-3	2247.12	35.00	79.25	.00	.00	.00	.00	78.60	5.00		
2	UFV-1	2188.77	35.25	79.50	.00	.00	.00	.00	38.85	1.00		
16	GASOY 17	2091.67	35.00	70.75	.00	.00	.00	.00	32.95	1.00		
4	HARDEE LS	1752.85	43.00	81.75	.00	.00	.00	.00	43.40	1.50		
9	JUPITER	1507.38	40.00	86.25	.00	.00	.00	.00	60.05	1.50		
8	CARTIE	1031.04	37.00	83.50	.00	.00	.00	.00	66.73	4.50		
GRAND MEAN												
STANDARD ERROR OF A VARIETY MEAN												
COEFFICIENT OF VARIATION												
5% LSD VARIETY MEANS (*****=NS)												
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)												
YIELD KG/HA	1.00	-.56++	-.59++	.00	.00	.00	.00	.00	.00	.05	-.25+	
	PLANT HEIGHT	-.56++	1.00	.53++	.00	.00	.00	.00	.00	-.13	-.08	
	DAYS TO MATURITY	-.59++	.53++	1.00	.00	.00	.00	.00	.00	.19	.41++	
	NODULE ABUND 1	.00	.00	1.00	.00	.00	.00	.00	.00	.00	.00	
	NODULE ABUND 2	.00	.00	.00	1.00	.00	.00	.00	.00	.00	.00	
	NODULE ACT. 1	.00	.00	.00	.00	1.00	.00	.00	.00	.00	.00	
	NODULE ACT. 2	.00	.00	.00	.00	.00	1.00	.00	.00	.00	.00	
	PLANT HEIGHT	.05	-.13	.19	.00	.00	.00	.00	.00	1.00	.47++	
	LODGING	-.25+	-.08	.41++	.00	.00	.00	.00	.00	.00	.00	
	SHATTER	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
	PLANTS HARVEST	.38++	-.54++	-.54++	.00	.00	.00	.00	.00	-.08	-.08	
	PODS PER PLANT	-.22	.17	.30+	.00	.00	.00	.00	.00	.38++	.24	
	FOD WEIGHT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
100 SEED QUALITY OF SEED GERM.	WEIGHT	.67++	-.27+	-.43++	.00	.00	.00	.00	.00	-.19	-.37++	
	PERCENT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
	GERM.	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	

TABLE 103 EXPERIMENT 43 YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	FODS PER PLANT	FOD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
7	TUNIA	1.00	197.25	36.50	.00	11.25	.00	.00
5	URBA	1.00	239.75	41.60	.00	10.25	.00	.00
13	WILLIAMS	1.00	264.75	32.00	.00	12.50	.00	.00
11	RILLITO	1.00	217.00	39.00	.00	10.25	.00	.00
15	COBB	1.00	283.75	30.35	.00	11.25	.00	.00
10	IMPROVED FELICAN	1.00	253.25	44.40	.00	9.75	.00	.00
3	SJ-2	1.00	221.50	68.30	.00	10.00	.00	.00
14	RANSOM	1.00	264.50	32.10	.00	11.00	.00	.00
12	BOSSIER	1.00	231.75	47.75	.00	10.25	.00	.00
6	TAC-2	1.00	225.25	41.95	.00	10.25	.00	.00
1	CH-3	1.00	185.50	45.35	.00	10.50	.00	.00
2	UFU-1	1.00	204.25	46.75	.00	10.25	.00	.00
16	GASOY 17	1.00	265.50	25.90	.00	11.00	.00	.00
4	HARDEE LS	1.00	153.00	51.25	.00	9.75	.00	.00
9	JUPITER	1.00	192.75	34.90	.00	10.25	.00	.00
8	CARIBE	1.00	224.50	55.85	.00	5.25	.00	.00
GRAND MEAN								
STANDARD ERROR OF A VARIETY MEAN								
COEFFICIENT OF VARIATION								
5% LSD VARIETY MEANS (*****NS=NS)								
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)								
YIELD	KG/HA	.00	*36++	-.22	.00	*67++	.00	.00
DAYS TO FLOWER	*.00	-.54++	*.17	.00	-.27+	.00	.00	.00
DAYS TO MATURITY	*.00	-.54++	*.30+	.00	-.43++	.00	.00	.00
NUDLE ABUND 1	*.00	*.00	*.00	.00	*.00	.00	.00	.00
NUDLE ABUND 2	*.00	*.00	*.00	.00	*.00	.00	.00	.00
NUDLE ACT. 1	*.00	*.00	*.00	.00	*.00	.00	.00	.00
NUDLE ACT. 2	*.00	*.00	*.00	.00	*.00	.00	.00	.00
PLANT HEIGHT	*.00	-.08	*.38++	.00	-.19	.00	.00	.00
LODGING	*.00	-.08	*.24	.00	-.37++	.00	.00	.00
SHATTER	1.00	*.00	*.00	.00	*.00	.00	.00	.00
PLANTS HARVEST	*.00	1.00	-.34++	*.00	*.21	.00	.00	.00
FODS PER PLANT	*.00	-.34++	1.00	.00	-.44++	.00	.00	.00
FOD HEIGHT	*.00	*.00	*.00	1.00	*.00	.00	.00	.00
100 SEED WEIGHT	*.00	*.21	-.44++	*.00	*.00	.00	.00	.00
QUALITY OF SEED	*.00	*.00	*.00	*.00	1.00	*.00	.00	.00
PERCENT GERM.	*.00	*.00	*.00	*.00	*.00	1.00	.00	.00

TABLE 104 EXPERIMENT 204 YEAR 1978

REGION - EUROPE
 SITE - ROME
 LATITUDE - 42 DEG. 2 MIN. N
 COOPERATOR - GIOVANNI FORRECA
 DATE PLANTED - MAY 30, 1978
 SOIL TYPE - SAND 87.0%, SILT 10.3%, CLAY 2.7%, PH 7.1
 FERTILIZER USED (KG/HA) - P 26.4, K 24.9
 AMOUNT OF MOISTURE - 432 MM
 NUMBER OF IRRIGATIONS - 7 (290 MM)

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING	C O R R E L A T I O N S (+ - PROB=.05 ++ - PROB=.01)	
											COUNTRY - ITALY ELEVATION - 42 M LONGITUDE - 12 DEG. 13 MIN. E	COUNTRY - ITALY ELEVATION - 42 M LONGITUDE - 12 DEG. 13 MIN. E
16	CRAWFORD	3300.66	52.25	147.75	2.00	1.00	100.00	100.00	79.75	1.25		
14	CORSOY	3140.21	40.25	123.75	2.00	1.00	100.00	97.50	89.50	1.00		
10	HODGSON	3100.62	37.25	114.25	2.00	1.00	100.00	100.00	81.75	1.00		
8	STEELE	2990.18	37.75	116.25	2.00	1.00	100.00	98.75	86.50	1.00		
9	HARCOR	2977.68	41.75	121.25	2.00	1.00	100.00	96.25	90.75	1.00		
7	SWIFT	2946.42	34.75	107.50	2.50	1.00	100.00	97.50	80.50	1.00		
15	EVANS	2902.66	35.75	105.50	2.00	1.00	100.00	100.00	75.75	1.00		
1	WILLIAMS	2842.23	44.50	130.75	2.00	1.00	100.00	98.75	75.00	1.00		
3	FRANKLIN	2781.81	48.50	142.75	2.00	1.00	100.00	100.00	100.75	1.00		
2	CALLAND	2704.71	45.75	133.50	2.00	1.00	100.00	98.75	106.75	1.00		
5	MITCHELL	2517.17	49.75	139.25	2.00	1.00	100.00	100.00	103.75	1.25		
11	ELF	2452.57	42.75	128.75	3.50	1.25	100.00	98.75	63.50	1.00		
6	ALTONA	2394.23	31.75	97.50	2.00	1.00	100.00	96.25	59.00	1.00		
12	COLUMBUS	2217.11	56.50	151.25	2.00	1.00	100.00	97.50	89.75	1.00		
13	UNION	1981.65	46.25	144.25	2.00	1.25	100.00	98.75	84.00	1.00		
4	CUTLER 71	1594.07	57.25	138.75	2.50	1.00	100.00	96.25	96.75	1.00		
GRAND MEAN			2677.75	43.92	127.69	2.16	1.03	100.00	98.44	86.45	1.03	
STANDARD ERROR OF A VARIETY MEAN			6.98	.43	.26	*.21	*.09	*.00	*.46	*.99	*.09	
COEFFICIENT OF VARIATION			.52%	1.95%	.41%	19.93%	17.33%	*.00%	2.97%	2.28%	17.33%	
5% LSD VARIETY MEANS (*****NS=NS)			19.89	1.22	.74	.61	*****NS	*.00	*****NS	2.81	*****NS	
C O R R E L A T I O N S (+ - PROB=.05 ++ - PROB=.01)												
YIELD KG/HA	1.00	-*.47++	-.33++	-.20	-.18	.00	.00	.19	-.05	.09		
DAYS TO FLOWER	-*.47++	1.00	+.92++	+.00	.04	.00	.04	.04	.54++	.17		
DAYS TO MATURITY	-.33++	.92++	1.00	-.02	.10	.00	.11	.54++	.18			
NODULE ABUND 1	-.20	.00	-.02	1.00	-.05	.00	-.14	-.52++	-.05			
NODULE ABUND 2	-.18	.04	.10	-.05	1.00	*.00	*.10	-.14	-.03			
NODULE ACT. 1	.00	.00	.00	.00	.00	1.00	*.00	.00	.00			
NODULE ACT. 2	.19	.04	.11	-.14	.10	.00	1.00	*.10	.10			
PLANT HEIGHT	-.05	.54++	.54++	-.32++	-.14	.00	*.10	1.00	*.08			
LOGGING	.09	.17	.18	-.05	-.03	.00	*.10	*.08	1.00			
SHATTER	-.09	-.32++	-.38++	-.08	-.05	*.00	-.09	-.50++	*.21			
PLANTS HARVEST	-.61++	.21	.15	.49++	.27+	.00	-.07	-.43++	-.09			
PODS PER PLANT	.86++	-.28+	-.19	-.31+	-.27+	.00	*.08	*.19	.06			
POD HEIGHT	.05	.44++	.40++	-.23	-.11	.00	*.15	*.77++	-.00			
100 SEED QUALITY OF SEED	.11	-.23	-.18	.01	.05	.00	*.22	*.24	*.18			
PERCENT GERM.	-.14	-.10	-.07	.04	.02	.00	-.28+	-.04	-.22			
	.02	-.09	-.03	-.32+	.14	.00	-.03	-.03	-.06	.07		

TABLE 104 EXPERIMENT 204 YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
16	CRAWFORD	1.25	205.25	36.25	13.25	16.60	1.50	98.25	38.6
14	CORSOY	1.00	217.25	37.75	14.50	13.88	2.50	98.50	38.4
10	HODGSON	1.00	207.75	29.25	14.50	18.20	1.50	97.00	36.8
8	STEELE	1.00	205.25	28.50	12.00	17.13	2.00	99.75	39.4
9	HARCOR	1.00	196.75	36.25	14.25	14.65	2.00	98.75	38.7
7	SWIFT	1.00	199.75	29.75	13.25	17.35	2.00	95.00	37.8
15	EVANS	1.00	205.75	32.00	14.25	15.35	2.00	99.25	38.7
1	WILLIAMS	1.00	196.00	33.25	14.25	15.20	2.00	97.75	37.3
3	FRANKLIN	1.00	192.50	34.00	14.25	14.85	2.00	97.25	40.3
2	CALLAND	1.00	193.50	29.75	15.00	16.28	2.00	97.25	40.1
5	MITCHELL	1.00	198.25	24.25	14.50	18.88	1.50	98.50	41.7
11	ELF	1.00	270.75	18.75	11.25	16.75	2.00	97.00	40.9
6	ALTONA	2.25	221.75	23.25	9.00	17.25	2.00	99.00	38.8
12	COLUMBUS	1.00	228.75	20.00	13.75	16.30	2.00	97.25	41.4
13	UNION	1.00	240.00	17.50	13.25	15.80	2.25	98.75	43.5
4	CUTLER 71	1.00	251.25	17.25	15.25	14.28	2.00	97.50	43.1
	GRAND MEAN	1.09	214.41	27.98	13.53	16.17	1.95	97.92	
	STANDARD ERROR OF A VARIETY MEAN	.09	5.53	1.01	.35	.16	.16	*.44	
	COEFFICIENT OF VARIATION	16.34%	5.16%	7.23%	5.10%	2.02%	16.33%	*.90%	
	5% LSD VARIETY MEANS (*****=NS)	.25	15.76	2.88	.98	.46	.45	1.26	
	CORRELATIONS								
	YIELD KG/HA	-.09	-.61++	.86++	.05	*.11	-.14	*.02	
	DAYS TO FLOWER	-.32++	*.21	-.28+	.44++	-.23	-.10	-.09	
	DAYS TO MATURITY	-.38++	*.15	-.19	.40++	-.18	-.07	-.08	
	NODULE ABUND 1	-.08	*.49++	-.31+	-.23	*.01	-.04	-.32+	
	NODULE ABUND 2	-.05	*.27+	-.27+	-.11	*.05	*.02	*.14	
	NODULE ACT. 1	*.00	*.00	*.00	*.00	*.00	*.00	*.00	
	NODULE ACT. 2	-.09	-.07	*.08	*.15	*.22	-.28+	-.03	
	PLANT HEIGHT	-.50++	-.43++	*.19	.77++	-.21	-.06	-.06	
	LOUNGING	*.21	-.09	*.06	-.00	*.18	-.22	*.07	
	SHATTER	1.00	*.05	-.10	-.61++	*.16	*.03	*.13	
	PLANTS HARVEST	*.05	1.00	-.75++	-.31+	-.10	*.20	-.09	
	PODS PER PLANT	-.10	-.75++	1.00	*.26+	-.27+	*.01	*.08	
	HEIGHT	-.61++	-.31+	*.26+	1.00	-.32+	-.06	-.14	
	100 SEED WEIGHT	*.16	-.10	-.27+	-.32+	1.06	-.57++	-.12	
	QUALITY OF SEED	*.03	*.20	*.01	-.06	-.57++	1.00	*.11	
	PERCENT GERM.	*.18	-.09	*.08	-.14	-.12	*.11	1.00	

TABLE 105 EXPERIMENT 203 YEAR 1978

REGION - EUROPE
 SITE - CAGLIARI, SARDINIA
 LATITUDE - 39 DEG. 25 MIN. N
 COOPERATOR - PROF. MAURO DEIDDA
 DATE PLANTED - MAY 24, 1978
 SOIL TYPE - VERTISOL, SAND 41.1%, SILT 21.9%, CLAY 37.0%, pH 7.8
 FERTILIZER USED (KG/HA) - N 20.5, P 30.0
 AMOUNT OF MOISTURE - 546 MM
 NUMBER OF IRRIGATIONS - 16 (400 MM)

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING	C O R R E L A T I O N S	
											++ - PROB=.05	++ - PROB=.01)
16	CRAWFORD	3236.42	60.25	•00	•00	•00	•00	•00	•00	100.85	1.00	
4	CUTLER 71	2781.92	51.25	•00	•00	•00	•00	•00	•00	93.60	1.00	
1	WILLIAMS	2664.51	53.25	•00	•00	•00	•00	•00	•00	86.98	1.00	
12	COLUMBUS	2660.72	58.50	•00	•00	•00	•00	•00	•00	96.02	1.00	
5	MITCHELL	2541.41	54.75	•00	•00	•00	•00	•00	•00	102.35	1.00	
2	CALLAND	2357.72	49.00	•00	•00	•00	•00	•00	•00	92.25	1.00	
11	ELF	2329.31	52.25	•00	•00	•00	•00	•00	•00	64.50	1.00	
13	UNTON	2194.86	56.25	•00	•00	•00	•00	•00	•00	97.07	1.00	
6	ALTONA	2115.32	39.00	•00	•00	•00	•00	•00	•00	61.73	1.00	
3	FRANKLIN	2069.87	54.75	•00	•00	•00	•00	•00	•00	102.25	1.00	
9	HARCOR	1340.77	46.75	•00	•00	•00	•00	•00	•00	83.20	1.00	
14	CORSOY	998.01	45.00	•00	•00	•00	•00	•00	•00	89.47	1.00	
8	STEELE	963.92	44.50	•00	•00	•00	•00	•00	•00	81.05	1.00	
10	HODGSON	784.01	44.00	•00	•00	•00	•00	•00	•00	78.10	1.00	
7	SWIFT	611.68	44.50	•00	•00	•00	•00	•00	•00	86.08	1.00	
15	EVANS	606.00	42.50	•00	•00	•00	•00	•00	•00	80.88	1.00	
GRAND MEAN												
STANDARD ERROR OF A VARIETY MEAN												
COEFFICIENT OF VARIATION												
52 LSD VARIETY MEANS (*****=NS)												
1503.39												
3.45												
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TABLE 105 EXPERIMENT 203 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
16	CRAWFORD	1.00	160.25	33.58	16.05	20.28	1.00	.00
4	CUTLER 71	1.00	168.00	24.80	12.80	22.23	2.50	.00
1	WILLIAMS	1.00	205.75	27.00	13.38	22.65	2.25	.00
12	COLUMBUS	1.00	195.25	20.80	20.25	18.70	1.50	.00
5	MITCHELL	1.00	194.00	29.08	18.20	21.33	3.25	.00
2	CAL-LAND	1.00	204.25	20.88	15.03	23.70	3.00	.00
11	ELF	1.00	217.25	32.53	11.63	19.90	4.00	.00
13	UNION	1.00	206.00	23.53	18.50	21.10	2.50	.00
6	ALTONA	1.00	189.75	7.23	10.18	22.08	2.00	.00
3	FRANKLIN	1.00	214.25	26.35	11.73	18.98	2.25	.00
9	HARCOR	1.00	212.75	23.10	9.15	18.98	4.00	.00
14	CORSOY	1.00	208.25	20.85	11.38	19.33	4.00	.00
8	STEELE	1.00	200.25	17.93	11.38	20.65	4.00	.00
10	HODGSON	1.00	213.25	21.70	10.28	21.95	4.00	.00
7	SWIFT	1.00	223.50	12.63	9.65	17.13	5.00	.00
15	EVANS	1.00	221.00	16.05	7.33	19.40	5.00	.00
	GRAND MEAN	1.00	202.11	22.37	12.93	20.52	3.14	.00
	STANDARD ERROR OF A VARIETY MEAN	.00	12.67	3.94	1.82	1.65	.29	.00
	COEFFICIENT OF VARIATION	.00%	12.54%	35.22%	28.19%	16.06%	18.28%	.00%
	5% LSD VARIETY MEANS (*****=NS)	.00	36.09	11.22	5.19	*****	.82	.00

C O R R E L A T I O N S (+ - PROB=.05 ++ - PROB=.01)

	YIELD	KG/HA	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
DAYS TO FLOWER	.00	-.24	.34++	.22	.69++	-.73++
DAYS TO MATURITY	.00	-.30+	.57++	.57++	-.01	-.59++
NODULE ABUND 1	.00	.00	.00	.00	.00	.00
NODULE ABUND 2	.00	.00	.00	.00	.00	.00
NODULE ACT. 1	.00	.00	.00	.00	.00	.00
NODULE ACT. 2	.00	.00	.00	.00	.00	.00
PLANT HEIGHT	.00	-.15	.29+	.53++	-.03	-.28+
LODGING	.00	.00	.00	.00	.00	.00
SHATTER	1.00	.00	.00	.00	.00	.00
PLANTS HARVEST	.00	-.23	-.27+	-.27+	-.09	*.39++
PODS PER PLANT	.00	-.27+	.10	.10	.02	-.30+
POD HEIGHT	.00	-.27+	.10	.10	-.15	-.36++
100 SEED WEIGHT	.00	-.09	.02	-.15	1.00	-.31+
QUALITY OF SEED	.00	.39++	-.30+	-.36++	-.31+	1.00
PERCENT GERM.	.00	.00	.00	.00	.00	1.00

TABLE 106 EXPERIMENT 250 YEAR 1978

REGION - EUROPE
 COUNTRY - POLAND
 SITE - RADZIKOW ELEVATION - 90 M
 LATITUDE - 52 DEG. 13 MIN. N LONGITUDE - 20 DEG. 39 MIN. E
 COOPERATOR - SOYBEAN LABORATORY, PLANT BREEDING AND ACCLIMIZATION INSTITUTE
 DATE PLANTED - APRIL 28, 1978 DATE HARVESTED - OCTOBER, 1978
 SOIL TYPE - LIGHT CLAY, PODZOL, FH 6.2
 FERTILIZER USED (KG/HA) - N 25.0, P 35.2, K 83.0
 AMOUNT OF MOISTURE - 403 MM
 LOCAL VARIETIES - WARSZAWSKA, AJMA

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
3	FRISKEBY V	2104.59	46.00	128.50	3.75	2.25	56.25	92.50	54.68	2.50
7	AJMA	1375.27	55.00	153.25	4.00	3.50	47.50	83.75	67.88	2.00
2	ALTOONA	1062.71	48.50	162.50	3.75	3.25	36.25	88.75	74.90	3.00
4	NORMAN	958.52	55.50	163.25	3.50	1.75	42.50	92.50	74.50	2.50
8	WARSZAWSKA	950.19	54.00	152.25	3.50	2.50	45.00	93.75	55.33	3.75
5	ADA	708.47	60.75	164.75	3.25	2.00	50.00	98.75	78.15	2.50
6	PORTAGE	666.80	54.75	163.25	2.75	2.00	40.00	95.00	77.60	2.50
1	ACME	645.96	53.50	157.75	4.00	2.75	53.75	90.00	74.55	2.00
STANDARD ERROR OF A VARIETY MEAN		1059.07	53.50	155.69	3.56	2.50	46.41	91.88	69.70	2.59
COEFFICIENT OF VARIATION		81.13	.70	.72	.29	.34	5.26	2.55	3.30	.28
- 5% LSD VARIETY MEANS (*****=NS)		15.32%	2.61%	.93%	16.06%	27.26%	22.66%	7.72%	9.47%	21.29%
- 210 -		238.61	2.05	2.13	*****	1.00	*****	*****	9.71	.81
CORRELATIONS (+ = PROB=.05 ++ = PROB=.01)										
YIELD KG/HA	- .64++	- .83++	.31	.14	.23	.17	- .55++	- .04		
DAYS TO FLOWER	- .64++	- .66++	-.20	-.13	.07	.20	.44+	-.08		
DAYS TO MATURITY	- .83++	.66++	1.00	-.25	-.05	.34	.72++	.01		
NODULE ABUND 1	- .31	-.20	-.25	1.00	.29	.11	.45++	.02		
NODULE ABUND 2	- .14	-.13	-.05	.29	1.00	.04	.33	-.12		
NODULE ACT. 1	.23	.07	-.34	.11	.04	1.00	.17	-.21		
NODULE ACT. 2	-.17	.20	.11	-.45++	-.33	.17	.01	.12		
PLANT HEIGHT	-.55++	.44+	.72++	-.18	-.06	.25	.01	1.00		
LOGGING	-.04	-.08	.01	.02	-.12	.21	.12	-.23		
SHATTER	.00	.00	.00	.00	.00	.00	.00	1.00		
PLANTS HARVEST	.75++	-.85++	-.69++	.18	.11	.12	-.23	-.42+		
FODS PER PLANT	.87++	-.60++	-.84++	.11	-.12	.25	-.03	-.61++		
POD HEIGHT	-.74++	.72++	.73++	-.31	-.14	.02	.17	.76++		
100 SEED WEIGHT	.69++	-.68++	-.69++	.20	.30	.09	.32	-.51++		
QUALITY OF SEED	-.81++	.42+	.68++	-.18	.00	-.17	.02	-.55++		
GERM. PERCENT	.68++	-.29	-.61++	.19	.16	.11	.11	-.67++		

TABLE 106 EXPERIMENT 250 YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
3	FRISKEBY V	1.00	245.00	23.65	10.03	19.65	2.00	73.00	37.1	18.2
7	AJMA	1.00	195.00	12.10	14.35	17.93	3.00	65.75	38.9	17.0
2	ALTOONA	1.00	212.50	9.68	12.70	17.05	3.00	52.50	39.9	-
4	NORMAN	1.00	195.50	12.60	15.10	16.63	3.00	42.25	45.4	14.7
8	WARSZAWSKA	1.00	188.25	11.30	12.25	16.25	3.00	71.25	41.5	14.7
5	ADA	1.00	162.75	8.68	17.25	13.45	3.00	51.25	47.3	13.5
6	FORTAGE	1.00	192.50	6.90	18.40	14.70	4.00	22.75	42.4	14.3
1	ACME	1.00	181.00	7.58	16.65	15.70	4.00	22.75	44.2	13.7
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN	.00	6.60	1.04	.58	.62	*.00	1.78	50.19		
COEFFICIENT OF VARIATION	.002	6.72%	1.8.02%	8.00%	7.60%	*.00%	7.11%			
5% LSD VARIETY MEANS (**NS=NS)	.00	19.42	3.06	1.72	1.83	.00	5.24			
CORRELATIONS (+ = PROB=.05 ++ = PROB=.01)										
YIELD	KG/HA	*.00	*.75++	*.87++	-.74++	*.69++	-.61++	*.63++		
DAYS TO FLOWER	*.00	-.85++	-.60++	-.72++	-.68++	-.42++	-.29			
DAYS TO MATURITY	*.00	-.69++	-.84++	-.73++	-.69++	*.68++	-.61++			
NUDULE ABUND 1	*.00	*.18	*.11	-.34	.20	-.18	*.19			
NUDULE ABUND 2	*.00	*.11	-.12	-.14	.30	*.00	*.16			
NUDULE ACT. 1	*.00	-.12	-.25	-.02	.09	-.17	*.11			
NUDULE ACT. 2	*.00	-.23	-.03	.17	.32	*.02	*.11			
PLANT HEIGHT	*.00	-.42+	-.61++	-.76++	-.51++	*.55++	-.67++			
LOGGING	*.00	-.11	*.06	-.18	-.06	-.18	*.30			
SHATTER	1.00	*.00	*.00	*.00	*.00	*.00	*.00			
PLANTS HARVEST	*.00	1.00	*.69++	-.73++	*.66++	-.56++	*.37+			
PODS PER PLANT	*.00	*.69++	1.00	-.72++	*.70++	-.82++	*.63++			
POD HEIGHT	*.00	-.73++	-.72++	1.00	-.69++	*.77++	-.76++			
100 SEED WEIGHT	*.00	*.66++	*.70++	-.69++	1.00	-.57++	*.50++			
QUALITY OF SEED	*.00	-.56++	-.82++	-.77++	-.57++	1.00	-.36++			
GERM.	*.00	*.37+	*.63++	-.76++	*.50++	-.86++	1.00			

TABLE 107 EXPERIMENT 101 YEAR 1978

REGION - EUROPE
 SITE - AZORES
 SITE - VINHA BRAVA
 LATITUDE - 38 DEG. 41 MIN. N
 DATE PLANTED - MAY 22, 1978
 FERTILIZER USED (KG/HA) - N 25.0, P 26.4, K 24.9
 AMOUNT OF MOISTURE - 567.2 MM

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING	
1	GASOY 17	3772.98	60.00	143.00	4.67	4.00	33.33	53.33	100.67	1.00	
2	KAHALA	3717.41	87.67	166.33	4.67	5.00	31.67	.00	123.67	2.67	
3	JAMES	3589.61	87.00	163.00	5.00	4.33	.00	63.33	127.67	3.00	
4	BRAGG	3439.58	98.00	159.00	4.67	4.00	31.67	73.33	103.00	2.00	
5	CUTLER 71	3311.77	74.67	154.67	5.00	4.33	.00	46.67	104.33	2.00	
6	MITCHELL	3250.65	90.00	166.00	5.00	4.33	.00	23.33	128.33	3.33	
7	DAVIS	3089.51	93.33	164.67	5.00	5.00	.00	.00	125.67	4.00	
8	WILLIAMS	3033.94	63.67	136.67	5.00	4.00	.00	68.33	91.00	1.00	
9	FRANKLIN	2889.47	68.67	147.67	4.67	4.00	31.67	58.33	115.67	1.33	
10	CALLAND	2728.32	72.67	150.67	5.00	4.00	.00	88.33	112.67	1.00	
11	RANSOM	2600.52	87.00	167.00	5.00	4.00	.00	66.67	122.33	2.67	
12	RILLITO	2589.41	88.00	165.00	5.00	4.33	.00	45.00	124.00	2.33	
13	BOSSIER	2078.19	94.67	167.33	5.00	4.33	.00	51.67	120.67	3.33	
14	COBB	1933.72	95.33	169.33	5.00	4.33	.00	50.00	136.67	2.67	
15	FORREST	1911.49	97.00	167.00	5.00	4.33	.00	36.67	126.67	3.67	
16	IMPROVED PELICAN	1680.89	116.00	175.67	5.00	4.67	.00	28.33	148.67	2.00	
STANDARD ERROR OF A VARIETY MEAN		2851.09	85.85	160.19	4.92	4.31	8.02	47.08	119.48	2.38	
COEFFICIENT OF VARIATION		358.76	.53	.44	.17	.28	16.43	20.55	4.08	.25	
5% LSD VARIETY MEANS (*****NS)		21.79%	1.07%	.48%	6.02%	11.17%	354.83%	75.60%	5.92%	18.37%	
C O R R E L A T I O N S											
(+ - PROB=.05 ++ - PROB=.01)											
YIELD KG/HA	1.00	-.44++	-.39++	-.41++	.12	'42++	-.20	-.35+	-.23		
DAYS TO FLOWER	-.44++	1.00	.91++	.15	.33+	-.15	-.25	.70++	.59++		
DAYS TO MATURITY	-.39++	.91++	1.00	.17	.37++	-.18	-.30+	.79++	.69++		
NODULE ABUND 1	-.41++	.15	.17	1.00	-.11	-1.00++	.20	.14	.19		
NODULE ABUND 2	.12	.33+	.37++	-.11	1.00	.12	-.86++	.30+	.26		
NODULE ACT. 1	.42++	-.15	-.18	-1.00++	.12	1.00	-.20	-.14	-.19		
NODULE ACT. 2	-.20	-.25	-.30+	.20	-.86++	-.20	1.00	-.26	-.25		
PLANT HEIGHT	-.35+	.70++	.79++	.14	.30+	-.14	-.26	1.00	.52++		
LOGGING	-.23	.59++	.69++	.19	.26	-.19	-.25	.52++	1.00		
SHATTER	-.41++	.38++	.33+	.12	.15	-.12	-.09	.48++	-.05		
PLANTS HARVEST	.20	-.29+	-.25	-.05	-.07	.06	-.02	-.05	-.01		
PODS PER PLANT	-.17	.37++	.49++	.29+	.09	-.29+	.04	.44++	.60++		
POD HEIGHT	.05	-.09	-.07	-.07	-.08	.07	.16	-.16	-.14		
100 SEED WEIGHT	.54++	-.82++	-.74++	-.23	-.18	.23	.06	-.63++	-.34+		
QUALITY OF SEED	.16	-.20	-.11	-.05	.14	.06	-.22	-.21	.36+		
PERCENT GERM.	-.21	.26	.14	.03	.27	-.03	-.19	.22	-.22		

TABLE 107 EXPERIMENT 101 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	PODS PER PLANT	HEIGHT	POD 100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
11	GASDY 17	1.00	204.67	25.33	12.00	29.17	3.67	68.00	40.3
2	KAHALA	1.00	166.33	37.33	17.00	23.93	3.33	66.00	44.7
8	JAMES	1.00	213.33	63.67	17.33	22.40	2.33	66.67	42.3
16	BRAGG	1.00	160.33	29.67	25.00	20.93	2.00	71.00	40.9
14	CUTLER 71	1.00	156.67	30.33	21.33	24.17	2.33	70.67	40.8
15	MITCHELL	1.00	195.00	45.67	14.67	22.77	3.33	44.00	39.5
10	DAVIS	1.00	190.00	35.67	14.67	21.83	4.00	65.67	42.5
5	WILLIAMS	1.00	213.00	23.67	20.00	25.80	3.00	55.00	41.8
13	FRANKLIN	1.33	199.33	31.67	22.33	26.87	3.00	72.00	40.5
12	CALLAND	1.00	181.67	31.33	21.33	22.23	2.00	64.33	40.0
6	RANSOM	1.00	212.67	39.33	23.67	22.93	3.00	45.33	42.5
3	RILLITO	1.00	146.67	39.33	29.00	18.23	1.67	52.00	43.9
4	BOSSIER	1.00	151.33	58.67	23.33	21.90	4.67	57.00	44.7
7	COBB	2.33	190.33	34.00	18.67	16.27	1.67	87.33	18.8
9	FORREST	1.00	212.67	41.33	12.67	21.23	4.00	77.00	41.1
1	IMPROVED PELICAN	2.00	157.33	36.67	13.67	14.03	1.00	95.33	45.5
GRAND MEAN									
STANDARD ERROR OF A VARIETY MEAN									
COEFFICIENT OF VARIATION									
5% LSD VARIETY MEANS (*****=NS)									
CORRELATIONS (+ - PROB=.05) ++ - PROB=.01)									
YIELD	KG/HA	-.41++	.20	-.17	.05	.54++	.16	-.21	
DAYS TO FLOWER		.38++	-.29+	.37++	-.09	-.82++	.20		
DAYS TO MATURITY		.33+	-.25	.49++	-.07	-.74++	.14		
NODULE ABUND 1		.12	-.05	.29+	-.07	-.23	-.05	.03	
NODULE ABUND 2		.15	-.07	.09	-.08	-.18	.14	.27	
NODULE ACT. 1		.12	-.06	-.29+	.07	.23	.06	-.03	
NODULE ACT. 2		.09	-.02	.04	.16	.06	-.22	-.19	
PLANT HEIGHT		.48++	-.05	.44++	-.16	-.63++	.22		
LODGING		-.05	-.01	.60++	-.14	-.34+	.36+	-.22	
SHATTER		1.00	-.10	-.09	-.11	-.54++	-.43++	.46++	
PLANTS HARVEST		-.10	1.00	-.04	-.23	.36+	.18	-.10	
PODS PER PLANT		-.09	-.04	1.00	.02	-.24	.15	-.16	
POD HEIGHT		-.11	-.23	.02	1.00	-.09	-.18	-.33+	
100 SEED WEIGHT		-.54++	.36+	-.24	-.09	1.00	.53++	.27	
QUALITY OF SEED		-.43++	.18	.15	-.18	.53++	1.00	-.30+	
GERM. PERCENT		.46++	-.10	-.16	-.33+	-.27	-.30+	1.00	

TABLE 108

EXPERIMENT 103

YEAR 1978

REGION - EUROPE
 SITE - S. MIGUEL - AZORES
 LATITUDE - 37 DEG. 45' MIN. N
 COOPERATOR - J. SOUSA DOURADO
 DATE PLANTED - APRIL 6, 1978
 SOIL PH - 6.2
 FERTILIZER USED (KG/HA) - N 25.0, P 26.4, K 24.9
 AMOUNT OF MOISTURE - 311.6 MM

COUNTRY - PORTUGAL

ELEVATION - 80 M

LONGITUDE - 25 DEG. 40 MIN. W

DATE HARVESTED - OCTOBER, 1978

FERTILIZER USED (KG/HA) - N 25.0, P 26.4, K 24.9

AMOUNT OF MOISTURE - 311.6 MM

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
11	GASOY 17	3379.84	73.50	178.00	3.25	1.00	95.00	100.00	100.75	2.00
14	CUTLER 74	2471.33	69.50	190.00	3.25	1.00	97.50	98.75	106.75	2.50
5	WILLIAMS	2415.07	80.00	188.00	3.25	1.00	97.50	95.00	102.75	2.00
13	FRANKLIN	2273.37	71.00	178.00	1.75	1.00	98.75	97.50	115.25	1.25
16	BRAGG	2240.03	70.25	190.00	4.25	1.00	77.50	97.50	126.75	1.25
12	CALLAND	2140.01	71.50	178.25	4.25	1.00	86.25	97.50	111.00	1.25
10	DAVIS	1985.81	110.50	229.75	4.50	1.75	65.00	97.50	98.50	2.50
1	IMPROVED PELICAN	1883.71	144.75	227.50	4.50	4.50	75.00	90.00	131.25	3.00
3	RILLITO	1777.44	107.25	218.00	3.50	2.75	77.50	97.50	134.00	3.00
8	JAMES	1681.59	104.75	224.00	4.75	2.00	66.25	81.25	114.00	2.75
4	BOSSIER	1569.06	112.00	231.25	2.75	1.50	83.75	78.75	104.75	2.25
15	MITCHELL	1479.46	106.75	230.75	4.00	2.50	61.25	96.25	104.75	2.75
7	COBB	1335.68	104.75	241.00	3.75	1.50	97.50	92.50	118.25	3.00
9	FORREST	1252.33	124.25	227.00	4.50	2.25	100.00	83.75	112.00	3.50
6	RANSOM	1100.22	101.00	227.00	2.75	1.00	93.75	77.50	94.25	1.75
2	KAHALA	977.28	104.50	224.25	1.75	1.00	82.50	86.25	112.75	4.50
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										

C O R R E L A T I O N S (+ - PROB=.05 ++ - PROB=.01)

YIELD KG/HA	1.00	-.45++	-.61++	.06	-.15	.21	.39++	-.06	-.35++
DAYS TO FLOWER	-.45++	1.00	.82++	.23	.61++	-.19	-.38++	.20	.40++
DAYS TO MATURITY	-.61++	.82++	1.00	.16	.41++	-.21	-.38++	.04	.50++
NODULE ABUND 1	.06	.23	.16	1.00	.27+	.28+	.03	.09	-.07
NODULE ABUND 2	-.15	.61++	.41++	.27+	1.00	-.23	.10	.31+	.10
NODULE ACT. 1	.21	-.19	-.21	-.28+	-.23	1.00	-.08	-.02	-.04
NODULE ACT. 2	.39++	-.38++	-.38++	.03	.10	-.08	1.00	.11	-.25+
PLANT HEIGHT	-.06	.20	.04	.09	.31+	.02	.11	1.00	.21
LODGING	-.35++	.40++	.50++	-.07	.10	-.04	-.25+	1.00	1.00
SHATTER	-.27+	.04	.24	-.15	.05	-.05	-.07	.04	.26+
PLANTS HARVEST	.37++	-.38++	-.55++	-.00	-.23	.20	.32+	-.18	-.31+
FODS PER PLANT	.29+	.02	-.12	.16	.20	.03	.21	.50++	-.11
FOD HEIGHT	.00	.00	.00	.00	.00	.00	.00	.00	.00
100 SEED WEIGHT	.23	-.23	-.12	-.34++	-.25+	.11	-.04	-.33++	-.04
QUALITY OF SEED	-.43++	.46++	.59++	-.00	.07	.00	-.41++	.18	.55++
PERCENT GERM.	.00	.00	.00	.00	.00	.00	.00	.00	.00

TABLE 108 EXPERIMENT 103 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
11	GASOY 17	2.00	231.75	35.00	.00	19.75	1.50	.00	47.1	16.7
14	CUTLER 71	2.00	215.75	29.75	.00	17.75	3.50	.00	45.5	18.7
5	WILLIAMS	2.25	229.00	28.00	.00	18.25	3.00	.00	45.8	18.8
13	FRANKLIN	2.25	221.25	29.75	.00	21.75	2.00	.00	44.5	18.8
16	BRAGG	2.00	187.25	36.50	.00	16.75	2.50	.00	46.3	19.4
12	CALLAND	2.00	245.25	31.25	.00	19.75	1.75	.00	43.8	17.8
10	DAVIS	2.00	205.25	26.75	.00	20.25	2.50	.00	45.9	17.4
1	IMPROVED FELICAN	2.00	198.00	46.25	.00	15.00	3.75	.00	46.0	19.0
3	RILLITO	2.00	189.75	45.00	.00	16.00	4.50	.00	44.6	17.8
8	JAMES	2.25	203.00	30.25	.00	17.00	3.75	.00	46.4	17.7
4	BOSSIER	2.25	189.50	29.50	.00	19.25	4.75	.00	45.0	18.5
15	MITCHELL	2.25	196.00	26.25	.00	19.50	4.75	.00	45.1	19.0
7	COBB	2.50	208.25	33.00	.00	18.00	3.75	.00	45.6	18.5
9	FORREST	2.25	216.25	16.25	.00	19.25	4.25	.00	45.0	18.6
6	RANSOM	2.00	194.00	20.25	.00	19.50	5.00	.00	45.1	18.6
2	KAHALA	2.50	186.25	23.25	.00	19.75	4.75	.00	45.7	19.2
		GRAND MEAN	2.16	207.28	30.44	.00	18.59	3.50	.00	
		VARIETY MEAN	.19	5.81	4.18	.00	1.06	.58	.00	
		STANDARD ERROR OF VARIATION	17.20%	5.60%	27.49%	.00%	11.36%	32.89%	.00%	
		COEFFICIENT OF VARIATION	17.20%	5.60%	27.49%	.00%	1.01	1.64	.00	
		5% LSD VARIETY MEANS (*****=NS)	*****	16.54	11.92	.00				
CORRELATIONS										
+ + - PROB=.05										
YIELD	KG/HA	-*.27+	*.37+	*.29+	.00	*.23	-.48+	.00		
DAYS TO FLOWER	.04	-.38+	*.02	.00	-.23	*.46+	.00			
DAYS TO MATURITY	.24	-.55+	-.12	.00	-.12	*.59+	.00			
NODULE ABUND 1	-.15	-.00	*.16	.00	-.34+	-.00				
NODULE ABUND 2	.05	-.23	*.20	.00	-.25+	*.07				
NODULE ACT. 1	-.05	*.20	*.06	.00	*.11	*.00				
NODULE ACT. 2	-.07	*.32+	*.21	.00	-.04	-.41+				
PLANT HEIGHT	.04	-.18	*.50+	.00	-.33+	*.18				
LODGING	*.26+	-.31+	-.11	.00	-.04	*.55+				
SHATTER	1.00	-.17	-.12	.00	*.24	*.03				
PLANTS HARVEST	-.17	1.00	-.12	.00	*.09	-.39+				
PODS PER PLANT	-.12	-.12	1.00	.00	-.31+	-.03				
POD HEIGHT	.00	.00	1.00	.00	*.00	*.00				
100 SEED WEIGHT	*.24	.09	-.31+	.00	1.00	*.23+				
QUALITY OF SEED	*.03	-.39+	-.08	.00	-.28+	1.00				
PERCENT GERM.	.00	.00	.00	.00	.00	.00	1.00			

TABLE 109
EXPERIMENT 104
YEAR 1978

REGION - EUROPE
 SITE - S. MIGUEL - AZORES
 LATITUDE - 37 DEG. 45 MIN. N.
 COOPERATOR - J. SOUSA NOVRA
 DATE PLANTED - MAY 11, 1978
 FERTILIZER USED (KG/HA) - N
 SOIL PH - 6.2
 AMOUNT OF MOISTURE - 361 MM

COUNTRY - PORTUGAL
 ELEVATION - 80 M
 LONGITUDE - 25 DEG., 40 MIN., W
 DATE HARVESTED - OCTOBER, 1978
 4; 5 34.2

TABLE 109 EXPERIMENT 104 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	FODS PER PLANT	FOD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
9	FORREST	2.00	203.50	29.25	.00	18.75	2.75	.00	45.2	18.6
13	FRANKLIN	2.00	202.00	33.75	.00	18.75	4.75	.00	43.6	18.1
3	RILLITO	2.25	201.25	34.00	.00	17.00	3.25	.00	48.0	18.3
1	IMPROVED FELICAN	2.00	184.25	49.75	.00	12.75	1.00	.00	45.5	18.2
14	CUTLER 71	2.00	199.00	44.25	.00	16.75	5.00	.00	44.1	18.9
10	DAVIS	2.50	214.25	30.00	.00	19.50	2.75	.00	46.5	17.8
15	MITCHELL	2.00	197.25	37.50	.00	20.25	3.25	.00	44.2	18.4
4	BOSSIER	2.25	197.25	41.00	.00	20.25	2.25	.00	47.3	19.4
7	CORB	2.00	216.50	21.75	.00	18.50	1.75	.00	43.5	19.6
6	RANSOM	2.50	185.00	27.25	.00	18.50	4.75	.00	46.4	20.1
12	CALLAND	2.00	215.75	22.50	.00	16.00	3.50	.00	42.7	18.2
8	JAMES	2.50	193.50	29.50	.00	15.75	4.75	.00	46.0	19.3
5	WILLIAMS	2.00	230.25	20.00	.00	17.75	5.00	.00	45.8	18.2
11	GASOY 17	2.00	207.00	30.50	.00	14.00	5.00	.00	45.1	17.9
16	BRAGG	2.00	179.75	31.00	.00	16.75	5.00	.00	45.8	17.8
2	KAHALA	2.25	191.75	30.00	.00	18.00	4.50	.00	46.1	17.7
		GRAND MEAN	2.14	201.14	32.00	.00	17.45	3.70	.00	
		VARIETY MEAN	.22	8.40	4.44	.00	1.02	.52	.00	
		COEFFICIENT OF VARIATION	20.10%	8.35%	27.73%	.00%	11.71%	28.24%	.00%	
		5% LSD VARIETY MEANS (*****NS=NS)	*****NS	23.93	12.64	.00	2.91	1.49	.00	
CORRELATIONS (+ = PROB=.05 ++ = PROB=.01)										
YIELD	KG/HA	-.23	-.08	*.55++	.00	*.49++	-.26+	*.00		
DAYS TO FLOWER		.16	-.04	*.15	.00	*.11	-.63++	*.00		
DAYS TO MATURITY		*.34++	-.21	*.05	.00	*.13	-.38++	*.00		
NODULE ABUND 1		*.02	*.06	-.02	.00	-.04	-.16	*.00		
NODULE ABUND 2		-.13	-.15	*.17	.00	-.21	-.45++	*.00		
NODULE ACT. 1		*.05	*.07	*.02	.00	*.01	.01	*.00		
NODULE ACT. 2		-.14	*.12	-.38++	.00	*.08	*.33++	*.00		
FLANT HEIGHT		-.14	-.33++	*.42++	.00	-.05	-.41++	*.00		
LOGGING		-.05	-.24	*.42++	.00	*.23	-.15	*.00		
SHATTER		1.00	-.17	-.15	.00	-.04	*.09	*.00		
PLANTS HARVEST		-.17	1.00	-.38++	.00	-.02	-.08	*.00		
FODS PER PLANT		-.15	-.38++	1.00	.00	*.19	-.18	*.00		
100 SEED HEIGHT		*.00	-.00	*.00	1.00	*.00	*.00	*.00		
100 SEED WEIGHT		-.04	-.02	*.19	.00	1.00	-.12	*.00		
QUALITY OF SEED		*.09	-.08	-.18	*.00	-.12	1.00	*.00		
PERCENT GERM.		*.00	*.00	*.00	*.00	*.00	*.00	1.00		

TABLE 110 EXPERIMENT 102

YEAR 1978

REGION - EUROPE
SITE - VINHA BRAVA
LATITUDE - 38 DEG. 40 MIN. N
COOPERATOR - LUIS DUTRA
DATE PLANTED - APRIL 10, 1978
FERTILIZER USED (KG/HA) - N 25
AMOUNT OF MOISTURE - 648 MM

COUNTRY - PORTUGAL (AZORES)
ELEVATION - 160 M
LONGITUDE - 27 DEG. 13 MIN. W
DATE HARVESTED - OCTOBER, 1978
.4, K 24, 9

TABLE 110 EXPERIMENT 102 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
16	BRAGG	1.00	210.25	39.00	18.50	24.53	2.00	100.00	43.8
14	CUTLER 71	1.00	246.75	31.25	10.00	25.88	2.75	75.25	43.2
5	WILLIAMS	2.25	278.25	30.25	14.00	28.60	2.75	77.50	43.4
13	FRANKLIN	2.00	243.00	34.00	14.75	28.38	2.75	74.00	40.7
11	GRASOY 17	1.75	261.50	28.75	11.25	26.30	4.25	60.50	42.1
12	CALLAND	1.50	259.50	27.25	14.00	23.28	2.75	86.50	42.4
2	NAHALA	1.00	191.50	50.50	24.25	25.20	3.75	71.00	41.9
3	RILLITO	1.00	197.25	56.50	24.25	22.15	3.25	52.50	44.1
8	JAMES	1.25	204.75	49.25	21.25	21.50	4.00	55.50	43.6
9	FORREST	1.75	229.75	37.00	12.50	24.83	5.00	65.75	43.3
15	MITCHELL	1.00	212.75	61.50	24.25	24.65	5.00	62.25	19.6
10	DAVIS	1.00	201.25	39.00	16.50	23.35	4.75	69.25	40.8
7	COBB	1.50	226.75	32.50	13.75	20.98	3.00	71.00	43.5
4	BOSSIER	1.75	225.50	34.50	18.25	19.58	4.25	75.75	43.0
1	IMPROVED PELICAN	1.00	230.25	35.50	18.00	17.10	1.75	84.75	45.1
6	RANSOM	1.00	221.00	51.50	13.00	23.23	4.75	66.25	45.6
	GRAND MEAN	1.36	227.47	39.89	16.78	23.72	3.55	72.98	48.9
	STANDARD ERROR OF A VARIETY MEAN	.21	12.59	4.74	2.62	1.17	.23	7.45	17.8
	COEFFICIENT OF VARIATION	30.19%	11.07%	23.78%	31.25%	9.85%	13.01%	20.42%	19.3
-219-	5% LSD VARIETY MEANS (*****NS)	.58	35.87	13.51	7.47	3.33	.66	21.22	16.9
	CORRELATIONS (+ - PROB=.05)				(+ - PROB=.01)				
	YIELD KG/HA	.05	*.14	-.20	-.14	*.42+	-.364+	*.15	
	DAYS TO FLOWER	-.39++	-.44++	*.30+	*.28+	-.65++	*.14	-.16	
	DAYS TO MATURITY	-.49++	-.52++	*.39++	*.32++	-.66++	*.13	-.14	
	NODULE ABUND 1	-.27+	-.35++	*.05	*.20	-.24	-.02	-.07	
	NODULE ABUND 2	-.29+	-.54++	*.35++	*.29+	-.34++	*.23	*.27+	
	NODULE ACT. 1	-.01	*.04	-.06	-.03	*.12	*.09	*.13	
	NODULE ACT. 2	*.29+	*.47++	-.54++	*.49++	*.34++	*.36++	*.44++	
	PLANT HEIGHT	-.29+	-.40++	*.32++	*.37++	-.48++	*.05	*.17	
	LODGING	-.00	-.34++	*.26+	*.11	-.23	*.55++	-.22	
	SHATTER	1.00	*.40++	-.40++	*.26+	*.21	-.02	*.14	
	PLANTS HARVEST	*.40++	1.00	-.33++	*.32++	*.24	*.20	*.14	
	PODS PER PLANT	-.40++	-.33++	1.00	*.47++	-.10	*.27+	*.29+	
	POD HEIGHT	-.26+	-.32++	*.47++	1.00	-.17	*.05	*.24	
	100 SEED WEIGHT	.21	*.24	-.10	-.17	1.00	*.04	*.02	
	QUALITY OF SEED	-.02	-.20	*.27+	*.05	*.04	1.00	*.44++	
	PERCENT GERM.	.14	*.14	-.29+	-.24	*.02	-.44++	1.00	

TABLE III. EXPERIMENT 52 YEAR 1978

REGION - MESOAMERICA
 SITE - TABOGA
 LATITUDE - 10 DEG. N
 COOPERATORS - RODRIGO ALFARO M. AND ADRIAN MORALES G.
 DATE PLANTED - AUGUST 17, 1978
 FERTILIZER USED (KG/HA) - N 30.0, P 39.6, K 24.9

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING	CORRELATIONS	
											++ - PROB=.05	++ - PROB=.01)
9	JUPITER	2365.55	42.25	98.00	.00	.00	.00	.00	.00	.00	64.83	.00
12	BOSSIER	2362.85	41.00	95.25	.00	.00	.00	.00	.00	.00	73.18	.00
16	CASOY 17	2310.90	36.25	87.00	.00	.00	.00	.00	.00	.00	54.88	.00
2	UFV-1	2082.25	34.50	91.50	.00	.00	.00	.00	.00	.00	68.28	.00
4	HARDEE LS	2073.35	36.25	89.00	.00	.00	.00	.00	.00	.00	58.25	.00
1	CH-3	2041.55	43.00	90.25	.00	.00	.00	.00	.00	.00	64.00	.00
3	SL-2	2004.95	35.25	88.50	.00	.00	.00	.00	.00	.00	51.65	.00
5	CRBA	1950.95	41.75	87.25	.00	.00	.00	.00	.00	.00	71.28	.00
10	IMPROVED FELICAN	1864.50	34.00	87.25	.00	.00	.00	.00	.00	.00	56.25	.00
13	WILLIAMS	1826.25	34.75	84.00	.00	.00	.00	.00	.00	.00	63.03	.00
11	RILLITO	1642.30	40.50	88.00	.00	.00	.00	.00	.00	.00	71.73	.00
8	CARIBE	1604.60	37.00	87.25	.00	.00	.00	.00	.00	.00	48.93	.00
14	RANSOM	1573.00	40.00	90.50	.00	.00	.00	.00	.00	.00	63.63	.00
7	TUNIA	1340.30	40.00	86.50	.00	.00	.00	.00	.00	.00	68.12	.00
6	JAC-2	1208.10	40.50	89.75	.00	.00	.00	.00	.00	.00	67.75	.00
15	COBB	1125.30	36.25	92.00	.00	.00	.00	.00	.00	.00	42.90	.00
GRAND MEAN												
STANDARD ERROR OF A VARIETY MEAN												
COEFFICIENT OF VARIATION												
52 LSD VARIETY MEANS (*****=NS)												
C O R R E L A T I O N S												
YIELD KG/HA	1.00	-.09	.06	.00	.00	.00	.00	.00	.00	.00	.22	.00
DAYS TO FLOWER	-.09	1.00	-.00	.00	.00	.00	.00	.00	.00	.02	.00	
DAYS TO MATURITY	.06	-.00	1.00	.00	.00	.00	.00	.00	.00	-.14	.00	
NODULE ABUND 1	.00	.00	.00	1.00	.00	.00	.00	.00	.00	.00	.00	
NODULE ABUND 2	.00	.00	.00	.00	1.00	.00	.00	.00	.00	.00	.00	
NODULE ACT. 1	.00	.00	.00	.00	.00	1.00	.00	.00	.00	.00	.00	
NODULE ACT. 2	.00	.00	.00	.00	.00	.00	1.00	.00	.00	.00	.00	
PLANT HEIGHT	.22	.02	-.14	.00	.00	.00	.00	.00	.00	1.00	.00	
LODGING	.07	.05	-.08	.00	.00	.00	.00	.00	.00	.00	.00	
SHATTER	.27+	-.05	.03	.00	.00	.00	.00	.00	.00	-.10	.00	
PLANTS HARVEST	.19	.18	.20	.00	.00	.00	.00	.00	.00	.16	.00	
PODS PER PLANT	.22	.02	-.10	.00	.00	.00	.00	.00	.00	-.00	.00	
POD HEIGHT	.07	.05	-.08	.00	.00	.00	.00	.00	.00	.56+	.00	
100 SEED WEIGHT	.27+	-.05	.03	.00	.00	.00	.00	.00	.00	-.10	.00	
QUALITY OF SEED	-.19	.18	.20	.00	.00	.00	.00	.00	.00	.00	.00	
PERCENT GERM.	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	

TABLE III EXPERIMENT 52 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
9	JUPITER	.00	78.50	93.50	11.48	17.90	2.75 .00
12	BOSSIER	.00	75.00	76.00	12.30	17.20	4.00 .00
16	GASOY 17	.00	80.75	77.50	10.68	16.90	4.00 .00
2	UFV-1	.00	78.25	87.25	10.23	15.88	2.25 .00
4	HARDEE LS	.00	83.75	75.25	11.05	14.48	3.00 .00
1	CH-3	.00	69.00	73.75	13.93	13.93	3.00 .00
3	SJ-2	.00	76.00	87.00	11.55	13.20	1.75 .00
5	ORBA	.00	71.75	81.50	15.38	15.80	2.50 .00
10	IMPROVED PELICAN	.00	84.00	79.00	11.60	13.48	2.00 .00
13	WILLIAMS	.00	86.25	82.25	10.63	16.78	2.25 .00
11	RILLITO	.00	81.50	82.50	11.88	15.58	2.50 .00
8	CARIBE	.00	70.50	61.75	9.98	9.80	3.00 .00
14	RANSOM	.00	77.00	60.00	10.70	14.63	4.00 .00
7	TUNIA	.00	76.75	90.75	10.50	17.05	2.75 .00
6	IAC-2	.00	82.75	57.50	13.63	13.63	3.25 .00
15	COBB	.00	62.75	49.50	10.28	14.80	4.75 .00
GRAND MEAN							
STANDARD ERROR OF A VARIETY MEAN							
COEFFICIENT OF VARIATION							
5% LSD VARIETY MEANS (*****=NS)							
CORRELATIONS							
C 4 - PROB=.05							
C 4 - PROB=.01							
YIELD KG/HA							
PLANTS HARVEST	.00	.29+	.22	.07	.27+	-.19	.00
DAYS TO FLOWER	.00	-.14	.02	.05	-.05	.18	.00
DAYS TO MATURITY	.00	-.12	-.10	-.08	.03	.20	.00
NUDULE ABUND 1	.00	.00	.00	.00	.00	.00	.00
NUDULE ABUND 2	.00	.00	.00	.00	.00	.00	.00
NUDULE ACT. 1	.00	.00	.00	.00	.00	.00	.00
NUDULE ACT. 2	.00	.00	.00	.00	.00	.00	.00
PLANT HEIGHT	.00	-.20	-.00	.56++	-.10	.16	.00
LOGGING	.00	.00	.00	.00	.00	.00	.00
SHATTER	1.00	.00	.00	.00	.00	.00	.00
PLANTS HARVEST	.00	1.00	.32++	-.04	.03	-.34++	.00
PODS PER PLANT	.00	.32++	1.00	.00	.28+	-.35++	.00
POD HEIGHT	.00	-.04	.00	1.00	-.01	.10	.00
100 SEED WEIGHT	.00	.03	.28+	-.01	1.00	-.11	.00
QUALITY OF SEED PERCENT	.00	-.34++	-.35++	.10	-.11	1.00	.00
GERM.	.00	.00	.00	.00	.00	.00	1.00

TABLE 112 EXPERIMENT 29 YEAR 1978

REGION - MESOAMERICA
 SITE - SAN JOSE DE OCOA
 LATITUDE - 18 DEG. 40 MIN. N
 COOPERATOR - CHRISTIAN SCHWITZKE
 DATE PLANTED - JULY 6, 1978
 SOIL TYPE - SAND 60%, SILT 10%, CLAY 30%, PH 4.8
 FERTILIZER USED (KG/HA) - N 25.0, P 26.4, K 24.9
 AMOUNT OF MOISTURE - 175.4 MM
 NUMBER OF IRRIGATIONS - 6 (300 MM)

COUNTRY - DOMINICAN REPUBLIC
 ELEVATION - 1000 M
 LONGITUDE - 70 DEG. 35 MIN. W
 DATE HARVESTED - OCTOBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING	C O R R E L A T I O N S	
											+++ - PROB=.05	++ - PROB=.01
13	WILLIAMS	3867.44	.00	135.00	2.75	3.50	100.00	.00	59.50	1.00		
2	UFV-1	3696.57	.00	182.00	2.75	3.00	100.00	.00	99.25	1.50		
11	RILLITO	3471.53	.00	144.00	4.00	4.25	100.00	.00	73.25	1.00		
14	RANSOM	3359.00	.00	161.00	2.00	2.75	100.00	.00	65.25	1.00		
15	COBB	3265.24	.00	161.00	3.75	4.00	100.00	.00	93.25	2.25		
10	IMPROVED FELICAN	3146.46	.00	171.50	3.75	4.00	100.00	.00	118.50	3.00		
8	CARIBE	2904.75	.00	164.00	2.75	3.50	100.00	.00	129.00	1.00		
12	BOSSIER	2708.87	.00	174.00	2.50	3.25	100.00	.00	79.25	2.00		
6	IAC-2	2667.20	.00	182.00	3.00	3.75	100.00	.00	126.75	1.75		
7	TUNIA	2146.26	.00	182.00	3.25	3.50	100.00	.00	94.50	2.00		
1	CH-3	2085.83	.00	198.00	2.75	3.25	100.00	.00	149.00	2.50		
3	SJ-2	1917.05	.00	196.00	4.00	4.25	100.00	.00	134.50	2.50		
9	JUPITER	1750.35	.00	205.00	3.50	4.00	100.00	.00	124.25	2.75		
5	ORBA	1646.16	.00	182.00	3.50	4.25	100.00	.00	149.00	3.25		
4	HARDEE LS	1544.06	.00	205.00	3.50	4.50	100.00	.00	112.00	2.25		
GRAND MEAN		2678.45	.00	176.17	3.18	3.72	100.00	.00	107.15	1.98		
STANDARD ERROR OF A VARIETY MEAN		205.79	.00	.13	.48	.39	.00	.00	7.45	.25		
COEFFICIENT OF VARIATION		15.37%	.00%	*.15%	29.88%	20.73%	.00%	.00%	13.90%	.25		
5% LSD VARIETY MEANS (*****NS)		587.32	.00	.37	*****	*****	.00	.00	21.25	.72		
C O R R E L A T I O N S												
YIELD	KG/HA	1.00	'00	-.76++	-.11	-.26+	'00	'00	'00	'00	-.57++	-.53++
DAYS TO	FLOWER	.00	1.00	.00	.00	.00	'00	'00	'00	'00	'00	'00
DAYS TO	MATURITY	-.76++	.00	1.00	.09	*.13	'00	'00	'00	'00	*.64++	*.56++
NODULE	ABUND 1	-.11	.00	*.09	1.00	*.86++	'00	'00	'00	'00	*.11	*.10
NODULE	ABUND 2	-.26+	.00	*.13	*.86++	1.00	'00	'00	'00	'00	*.13	*.13
NODULE	ACT. 1	*.00	.00	*.00	*.00	*.00	1.00	'00	'00	'00	'00	'00
NODULE	ACT. 2	*.00	.00	*.00	*.00	*.00	*.00	1.00	'00	'00	'00	'00
PLANT	HEIGHT	-.57++	.00	*.64++	*.11	*.13	'00	'00	'00	'00	1.00	*.56++
LOGGING	-.53++	.00	*.56++	*.10	*.13	'00	'00	'00	'00	*.56++	1.00	
SHATTER	*.19	.00	-.20	*.15	*.09	'00	'00	'00	'00	-.12	*.08	
PLANTS	HARVEST	*.46++	.00	-.59++	-.08	-.15	'00	'00	'00	'00	-.49++	*.43++
PODS PER	PLANT	-.32+	.00	*.48++	*.09	*.02	'00	'00	'00	'00	*.76++	*.41++
POD	HEIGHT	*.02	.00	*.28+	*.14	*.01	'00	'00	'00	'00	*.14	*.20
100 SEED	WEIGHT	*.26+	.00	-.05	-.21	-.30+	'00	'00	'00	'00	-.56++	-.34++
QUALITY	OF SEED	-.26+	.00	*.20	*.03	-.01	'00	'00	'00	'00	*.02	*.39++
PERCENT	GERM.	-.07	.00	.12	.01	-.01	'00	'00	'00	'00	-.04	*.34++

TABLE 112 EXPERIMENT 29 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
13 WILLIAMS	1.00	338.00	20.25	11.00	21.00	2.00	97.00	42.8	16.1
2 UFV-1	1.00	218.25	43.50	19.50	23.00	3.00	96.00	45.5	17.2
11 RILLITO	1.00	219.25	29.00	10.50	20.00	4.00	94.00	42.6	16.2
14 RANSOM	1.00	297.75	22.00	10.75	21.75	5.00	99.00	42.4	18.5
15 COBB	2.00	294.75	35.50	20.50	20.00	4.00	97.00	41.7	17.4
10 IMPROVED PELICAN	1.00	203.00	63.25	14.00	18.00	4.00	98.00	45.4	16.4
8 CARIBE	1.00	233.50	64.75	12.00	18.00	2.00	90.00	48.1	14.2
12 BOSSIER	1.00	212.75	31.00	12.50	21.00	5.00	93.00	44.2	18.7
6 IAC-2	1.00	235.50	37.00	16.00	20.00	3.00	94.00	43.7	16.4
7 TUNIA	1.00	234.50	34.00	17.00	23.00	4.00	96.00	44.2	17.3
1 CH-3	1.00	204.50	75.00	13.75	19.00	4.00	98.00	44.7	16.6
1 SJ-2	1.00	213.00	62.50	14.75	19.00	4.00	95.00	45.7	15.8
3 JUPITER	1.00	156.75	53.25	14.50	21.00	4.00	96.00	46.2	15.4
9 ORBA	1.00	222.50	50.75	11.25	18.00	5.00	98.00	43.2	15.4
5 HARDEE LS	1.00	210.50	39.25	13.75	20.00	3.00	97.00	44.3	14.3
GRAND MEAN	1.07	232.97	44.07	14.12	20.18	3.73	95.37		
STANDARD ERROR OF A VARIETY MEAN	.00	17.27	5.65	.87	.06	.00	.00		
COEFFICIENT OF VARIATION	.00%	14.83%	25.64%	12.26%	.64%	.00%			
5% LSD VARIETY MEANS (*****NS)	.00	49.29	16.12	2.47	.18	.00	.00		
CORRELATIONS (+ = PROB=.05 ++ = PROB=.01)									
YIELD KG/HA	.19	.46++	-.32+	.02	.26+	-.26+			
DAYS TO FLOWER	.00	.00	.00	.00	.00	.00	.00		
DAYS TO MATURITY	-.20	-.59++	.48++	.28+	-.05	.20	.12		
ODULE ABUND 1	+.15	-.08	.09	.14	-.21	.03	.01		
ODULE ABUND 2	+.09	-.15	-.02	.01	-.30+	-.01	-.01		
ODULE ACT. 1	.00	.00	.00	.00	.00	.00	.00		
ODULE ACT. 2	.00	.00	.00	.00	.00	.00	.00		
PLANT HEIGHT	-.12	-.49++	.76++	.14	-.56++	.02	-.04		
LOGGING	+.08	-.43++	.41++	.20	-.34++	.39++	.34++		
SHATTER	1.00	.31+	-.12	.52++	-.03	.08	.13		
HARVEST	.31+	1.00	-.48++	-.01	.17	.19	.16		
PLANT	-.12	-.43++	1.00	.10	-.53++	-.04	-.08		
POD HEIGHT	.52++	-.01	.10	1.00	.31+	.09	.06		
100 SEED WEIGHT	-.03	.17	-.53++	.31+	1.00	.02	.12		
QUALITY OF SEED	.08	-.19	-.04	-.09	.02	1.00	.39++		
PERCENT GERM.	.13	.16	-.08	.06	.12	.39++	1.00		

TABLE 113 EXPERIMENT 119 YEAR 1978

REGION - MESOAMERICA
 SITE - CHIMALtenango
 LATITUDE - 14 DEG. 39 MIN. N
 COOPERATOR - DARRYL JORDAN
 DATE PLANTED - JUNE 5, 1978
 SOIL TYPE - CLAY 60%, VOLCANIC ASH 40%, PH 6.2
 FERTILIZER USED (KG/Ha) - N 16.0, P 20.0, K 0.0
 AMOUNT OF MOISTURE - 849 MM

COUNTRY - GUATEMALA
 ELEVATION - 1800 M
 LONGITUDE - 90 DEG. 49 MIN. W
 DATE HARVESTED - OCTOBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
6	DAVIS	2704.71	67.75	182.50	3.75	1.25	100.00	92.50	61.75	.00
3	COBB	2332.97	61.50	158.25	4.00	1.00	100.00	87.50	50.00	.00
2	BOSSIER	2256.70	59.50	159.50	4.25	1.00	100.00	85.00	64.00	.00
5	FORREST	2113.76	56.00	168.00	3.75	1.00	100.00	90.00	62.75	.00
7	GASOY 17	1619.07	58.75	171.75	4.00	1.50	96.25	91.25	44.25	.00
4	JAMES	1604.49	53.00	148.00	4.00	1.00	100.00	83.75	39.75	.00
10	MITCHELL	1514.89	44.75	145.00	4.00	1.25	95.00	86.25	38.00	.00
11	BRAGG	1208.57	59.50	178.25	4.00	1.25	98.75	87.50	60.25	.00
8	CALLAND	952.27	47.25	148.00	4.00	1.25	100.00	83.75	24.00	.00
1	IMPROVED PELICAN	939.77	94.50	182.50	4.00	1.00	100.00	90.00	81.00	.00
9	FRANKLIN	539.69	44.00	148.00	4.00	1.50	100.00	76.25	37.00	.00
STANDARD ERROR OF A VARIETY MEAN		1616.99	58.77	162.70	3.98	1.18	99.09	86.70	51.16	.00
COEFFICIENT OF VARIATION		245.61	2.51	5.97	.18	.17	1.85	6.47	4.73	.00
5% LSD VARIETY MEANS (*****=NS)		30.38%	8.54%	7.34%	9.18%	28.33%	3.73%	14.94%	18.49%	.002
		709.37	7.25	17.25	*****	*****	*****	*****	13.66	.00

CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)

YIELD KG/HA	1.00	.11	.17	-.07	-.25	.02	.04	.27	.00
DAYS TO FLOWER	.11	1.00	.62++	-.05	-.17	-.01	.15	.70++	.00
DAYS TO MATURITY	.17	.62++	1.00	-.23	-.11	-.05	.17	.54++	.00
NODULE ABUND 1	-.07	-.05	-.23	1.00	-.03	-.02	-.05	-.09	.00
NODULE ABUND 2	-.25	-.17	-.11	-.03	1.00	-.11	-.09	-.24	.00
NODULE ACT. 1	-.01	-.05	-.05	-.02	-.11	1.00	-.10	.03	.00
NODULE ACT. 2	.02	.15	.17	-.05	-.09	.10	1.00	.12	.00
PLANT HEIGHT	.04	.00	.00	.00	.00	.03	.12	1.00	.00
LOGGING	.00	.00	.00	.00	.00	.00	.00	.00	1.00
SHATTER	.00	.00	.00	.00	.00	.00	.00	.00	.00
PLANTS HARVEST	.10	.19	.19	.18	.13	-.12	.08	.09	.00
PODS PER PLANT	.63++	.33+	.32+	.03	-.10	.10	.22	.54++	.00
POD HEIGHT	.09	.25	.01	.13	-.28	-.01	.24	.22	.00
100 SEED WEIGHT	.38++	-.27	.31+	-.09	-.02	-.11	.07	-.02	.00
QUALITY OF SEED	-.59++	-.62++	-.55++	.06	.22	-.06	-.28	-.66++	.00
PERCENT GERM.	.11	.21	-.00	-.08	.03	.02	-.11	.25	.00

TABLE 113 EXPERIMENT 119 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	PODS PER PLANT	HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
6 DAVIS	.00	277.00	19.50	8.75	21.05	1.00	88.75	44.0	17.6
3 COBB	.00	269.50	17.00	13.00	18.38	1.00	96.25	43.8	18.3
2 BOSSIER	.00	262.75	21.50	10.75	18.55	1.00	86.25	45.4	17.6
5 FORREST	.00	250.75	21.00	10.00	19.50	1.00	95.75	45.0	17.7
7 GASOY 17	.00	280.00	15.00	8.75	19.60	1.00	94.75	44.5	16.9
4 JAMES	.00	276.25	11.25	7.50	19.08	3.00	96.50	45.3	18.0
10 MITCHELL	.00	264.00	13.75	7.00	18.55	4.00	93.75		
11 BRAGG	.00	280.00	12.00	9.25	22.58	3.00	90.00	45.8	17.0
8 CALLAND	.00	239.75	10.75	8.75	17.88	5.00	78.50		
1 IMPROVED PELICAN	.00	271.50	17.25	11.75	14.25	1.00	95.25		
9 FRANKLIN	.00	248.75	6.00	8.75	16.18	5.00	90.75		
GRAND MEAN	.00	265.48	15.00	9.48	18.69	2.36	91.50		
STANDARD ERROR OF A VARIETY MEAN	.00	19.11	2.66	1.58	.69	.00	3.47		
COEFFICIENT OF VARIATION	.00%	14.40%	35.53%	33.32%	7.41%	.00%	7.58%		
5% LSD VARIETY MEANS (*****=NS)	.00	*****	7.70	*****	2.00	.00	10.01		
C O R R E L A T I O N S	(+ - PROB=.05		(+ - PROB=.05		(+ - PROB=.01)				
YIELD KG/HA	.00	*.10	*.63++	*.09	*.38++		-*.59++		*.11
DAYS TO FLOWER	.00	*.19	*.33+	*.25	-.27		-.62++		*.21
DAYS TO MATURITY	.00	*.25	*.32+	*.01	*.31+		-.55++		-.00
NODULE ABUND 1	.00	*.18	*.03	*.13	-.09		*.06		-.08
NODULE ABUND 2	.00	*.13	-.10	-.28	-.02		*.22		*.03
NODULE ACT. 1	.00	-.12	*.10	-.01	-.11		-.06		*.02
NODULE ACT. 2	.00	*.08	*.22	*.24	*.07		-.28		-.11
PLANT HEIGHT	.00	*.09	*.54++	*.22	-.02		-.66++		*.25
LODGING	.00	*.00	*.00	*.00	*.00		*.00		*.00
SHATTER	1.00	*.00	*.00	*.00	*.00		*.00		*.00
PLANTS HARVEST	.00	1.00	-.06	-.09	*.23		-.06		
PODS PER PLANT	.00	-.06	1.00	*.13	*.08		-.62++		*.07
POD HEIGHT	.00	-.09	*.13	1.00	-.14		-.19		
100 SEED WEIGHT	.00	*.23	*.08	-.14	1.00		-.12		*.16
QUALITY OF SEED	.00	-.20	-.62++	-.29	-.12		1.00		-.29
PERCENT GERM.	.00	-.06	.07	-.19	-.16		-.29		1.00

TABLE 114 EXPERIMENT 72 YEAR 1978

REGION - MESOAMERICA
 SITE - GUARUMA 2
 LATITUDE - 15 DEG. 22 MIN. N
 COOPERATOR - JULIO ROMERO
 DATE PLANTED - NOVEMBER 9, 1978
 AMOUNT OF MOISTURE - 415 MM
 LOCAL VARIETIES - SIATSA 31, SIATSA 194

COUNTRY - HONDURAS
 ELEVATION - 36 M
 LONGITUDE - 87 DEG. 58 MIN. W
 DATE HARVESTED - FEBRUARY, 1979

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NOODLE ACT. 1	NOODLE ACT. 2	PLANT HEIGHT	LOGGING
15	SIATSA-194	3130.81	37.75	98.00	*00	*00	*00	*00	77.75	2.75
14	SIATSA-31	2862.03	32.00	98.00	*00	*00	*00	*00	68.00	2.75
12	BOSSIER	2808.91	34.75	98.00	*00	*00	*00	*00	43.00	1.00
7	TUNIA	2740.84	28.25	111.00	*00	*00	*00	*00	54.25	1.25
8	CARIBE	2725.57	33.25	98.00	*00	*00	*00	*00	59.75	1.75
10	IMPROVED PELICAN	2581.14	31.50	98.00	*00	*00	*00	*00	63.50	2.00
1	CH-3	2403.32	31.50	111.00	*00	*00	*00	*00	63.75	2.00
4	HARDEE LS	2402.97	42.25	111.00	*00	*00	*00	*00	51.50	1.75
6	TAC-2	2254.35	31.00	111.00	*00	*00	*00	*00	63.50	2.25
9	JUPITER	2224.48	30.50	107.00	*00	*00	*00	*00	54.00	2.00
13	WILLIAMS	2163.71	25.25	98.00	*00	*00	*00	*00	48.50	1.00
11	RILLITO	2068.92	26.00	98.00	*00	*00	*00	*00	50.25	1.75
3	SJ-2	1939.39	35.00	98.00	*00	*00	*00	*00	54.00	2.00
5	ORBA	1359.14	31.00	108.00	*00	*00	*00	*00	44.50	1.25
16	GAGOY 17	1337.61	24.25	98.00	*00	*00	*00	*00	23.75	1.00
2	UFQ-1	1047.65	30.75	104.50	*00	*00	*00	*00	23.50	1.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****NS=NS)										
CORRELATIONS										
(+) - PROB.=.05										
(-) - PROB.=.01										
YIELD KG/HA	1.00	*31+	-*1.0	*00	*00	*00	*00	*00	734+	*494+
DAYS TO FLOWER	*31+	1.00	*1.4	*00	*00	*00	*00	*00	*34+	*294
DAYS TO MATURITY	-*1.0	*14	1.00	*00	*00	*00	*00	*02	*03	
NODULE ABUND 1	*00	*00	1.00	*00	*00	*00	*00	*00	*00	
NODULE ABUND 2	*00	*00	*00	1.00	*00	*00	*00	*00	*00	
NODULE ACT. 1	*00	*00	*00	*00	1.00	*00	*00	*00	*00	
NODULE ACT. 2	*00	*00	*00	*00	*00	1.00	*00	*00	*00	
PLANT HEIGHT	*73+	*34+	*02	*00	*00	*00	*00	*00	1.00	*774+
LOGGING	*49+	*29+	-*0.3	*00	*00	*00	*00	*00	*774+	1.00
SHATTER	*00	*00	*00	*00	*00	*00	*00	*00	*00	
PLANTS HARVEST	*34+	-*21	-*46+	*00	*00	*00	*00	*00	*19	*09
PODS PER PLANT	*00	*00	*00	*00	*00	*00	*00	*00	*00	
POD HEIGHT	*70+	*51+	-*0.5	*00	*00	*00	*00	*00	*00	
100 SEED WEIGHT	*31+	-*10	*08	*00	*00	*00	*00	*00	*86+	*65+
QUALITY OF SEED	*00	*00	*00	*00	*00	*00	*00	*00	*09	*06
PERCENT GERM.	*00	*00	*00	*00	*00	*00	*00	*00	*00	

TABLE 114 EXPERIMENT 72 YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
15	SIATSA-199	.00	227,75	.00	19.00	22.40	.00	.00
14	SIATSA-31	.00	293,25	.00	14.00	21.35	.00	.00
12	BOSSTEF	.00	202,75	.00	10.75	21.00	.00	.00
7	TUNIA	.00	178,50	.00	8.50	23.25	.00	.00
8	CARIBE	.00	169,25	.00	12.00	15.90	.00	.00
10	IMPROVED PELICAN	.00	214,00	.00	10.50	17.20	.00	.00
1	CH-3	.00	175,25	.00	11.00	18.33	.00	.00
4	HORDEE LS	.00	111,50	.00	10.50	19.48	.00	.00
6	JAC-2	.00	164,50	.00	11.50	18.55	.00	.00
9	JUPITER	.00	152,00	.00	11.50	23.33	.00	.00
13	WILLIAMS	.00	224,25	.00	7.75	21.43	.00	.00
11	RILLITO	.00	160,25	.00	7.25	18.60	.00	.00
3	SJ-2	.00	158,50	.00	12.00	15.83	.00	.00
5	ORBA	.00	167,75	.00	9.00	15.03	.00	.00
16	GASOY 17	.00	242,00	.00	.00	19.58	.00	.00
2	IFU-1	.00	90,00	.00	.50	19.83	.00	.00
<hr/>								
GRAND MEAN								
		.00	183,22	.00	9.73	19.44	.00	.00
STANDARD ERROR OF A VARIETY MEAN								
COEFFICIENT OF VARIATION								
5% LSD VARIETY MEANS (*****NS)								
<hr/>								
C O R R E L A T I O N S								
			(+ - FROE=,05		(+ - FROE=,01)			
<hr/>								
YIELD	KG/HA	.00	*344+	.00	*704+	*314	.00	.00
DAYS TO FLOWER	.00	-21	.00	.514+	-*10	.00	.00	.00
DAYS TO MATURITY	.00	-*464+	.00	-.05	*08	.00	.00	.00
NODULE ABUND 1	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ABUND 2	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 1	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 2	.00	.00	.00	.00	.00	.00	.00	.00
PLANT HEIGHT	.00	*19	.00	*864+	.09	.00	.00	.00
LONGING	.00	*09	.00	*654+	.06	.00	.00	.00
SHATTER	1.00	*00	.00	*00	.00	.00	.00	.00
PLANTS HARVEST	.00	1.00	.00	*20	*1.7	.00	.00	.00
PODS PER PLANT	.00	.00	1.00	.00	.00	.00	.00	.00
POD HEIGHT	.00	*20	.00	1.00	*08	.00	.00	.00
100 SEED WEIGHT	.00	*1.7	.00	*08	1.00	.00	.00	.00
QUALITY OF SEED	.00	*00	.00	*00	*00	1.00	.00	.00
PERCENT GERM.	.00	*00	.00	*00	*00	*00	1.00	.00

TABLE 115 EXPERIMENT 127 YEAR 1978

REGION - MIDDLE EAST
 COUNTRY - IRAN
 SITE - GORGAN
 ELEVATION - 120 M
 LATITUDE - 36 DEG. 51 MIN. N
 LONGITUDE - 54 DEG. 28 MIN. E
 COOPERATORS - H. POURDAVAI, A. SHARIATI AND L. VULIC
 DATE PLANTED - APRIL 27, 1978
 DATE HARVESTED - SEPTEMBER, 1978
 SOIL PH - 7-8
 FERTILIZER USED (KG/HA) - N 36.0, P 92.0, K 25.0
 NUMBER OF IRRIGATIONS - 3
 SUBSTITUTE VARIETIES - DARE, HILL

TABLE 115 EXPERIMENT 127 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
14	Mitchell	.00	.00	.00	.00	.00	.00	.00
11	Calland	.00	.00	.00	.00	.00	.00	.00
3	Bossier	.00	.00	.00	.00	.00	.00	.00
16	Columbus	.00	.00	.00	.00	.00	.00	.00
4	Williams	.00	.00	.00	.00	.00	.00	.00
5	Ransom	.00	.00	.00	.00	.00	.00	.00
12	Franklin	.00	.00	.00	.00	.00	.00	.00
13	Cutler 71	.00	.00	.00	.00	.00	.00	.00
9	Davis	.00	.00	.00	.00	.00	.00	.00
10	GasoY 71	.00	.00	.00	.00	.00	.00	.00
7	James	.00	.00	.00	.00	.00	.00	.00
15	Hill	.00	.00	.00	.00	.00	.00	.00
6	Dare	.00	.00	.00	.00	.00	.00	.00
1	Improved Pelican	.00	.00	.00	.00	.00	.00	.00
8	Forrest	.00	.00	.00	.00	.00	.00	.00
2	Rillito	.00	.00	.00	.00	.00	.00	.00
	GRAND MEAN	.00	.00	.00	.00	.00	.00	.00
	STANDARD ERROR OF A VARIETY MEAN	.00	.00	.00	.00	.00	.00	.00
	COEFFICIENT OF VARIATION	.00%	.00%	.00%	.00%	.00%	.00%	.00%
	5% LSD VARIETY MEANS (*****=NS)	.00	.00	.00	.00	.00	.00	.00
	CORRELATIONS		(+ - PROB=.05	(+ - PROB=.05	(+ - PROB=.01)			
	YIELD	KG/HA	.00	.00	.00	.00	.00	.00
	DAYS TO FLOWER	.00	.00	.00	.00	.00	.00	.00
	DAYS TO MATURITY	.00	.00	.00	.00	.00	.00	.00
	NODULE ABUND 1	.00	.00	.00	.00	.00	.00	.00
	NODULE ABUND 2	.00	.00	.00	.00	.00	.00	.00
	NODULE ACT. 1	.00	.00	.00	.00	.00	.00	.00
	NODULE ACT. 2	.00	.00	.00	.00	.00	.00	.00
	PLANT HEIGHT	.00	.00	.00	.00	.00	.00	.00
	LOGGING	.00	.00	.00	.00	.00	.00	.00
	SHATTER	1.00	.00	.00	.00	.00	.00	.00
	PLANTS HARVEST	.00	1.00	.00	.00	.00	.00	.00
	PODS PER PLANT	.00	.00	1.00	.00	.00	.00	.00
	POD HEIGHT	.00	.00	.00	1.00	.00	.00	.00
	100 SEED WEIGHT	.00	.00	.00	.00	1.00	.00	.00
	QUALITY OF SEED	.00	.00	.00	.00	.00	1.00	.00
	PERCENT GERM.	.00	.00	.00	.00	.00	.00	1.00

TABLE 116 EXPERIMENT 123

YEAR 1978

REGION - MIDDLE EAST
 SITE - SARI
 LATITUDE - 36 DEG. 41 MIN. N. ELEVATION - 28 M
 COOPERATORS - H. POURDAVAI, H. GHAFFARI AND L. VULIC
 DATE PLANTED - APRIL 25, 1978 DATE HARVESTED - SEPTEMBER, 1978
 FERTILIZER USED (KG/HA) - N 36.0, P 92.0, K 25.0
 SUBSTITUTE VARIETIES - DARE, HILL

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	COUNTRY - IRAN		PLANT HEIGHT	LONGING
					NODEL ABUND 1	NODEL ABUND 2		
11	COLUMBUS	5747.00	56.00	•00	•00	•00	•00	153.75
4	JAMES	5009.00	56.00	•00	•00	•00	•00	147.50
5	FORREST	4632.50	70.00	•00	•00	•00	•00	123.75
1	RILLITO	4526.00	77.00	•00	•00	•00	•00	136.25
3	DARE	4398.50	73.00	•00	•00	•00	•00	117.50
2	WILLIAMS	4314.00	40.00	•00	•00	•00	•00	115.00
9	MITCHELL	4284.50	41.00	•00	•00	•00	•00	120.00
10	HILL	4269.50	71.00	•00	•00	•00	•00	107.50
6	CALLAND	3836.50	40.00	•00	•00	•00	•00	113.75
8	CUTLER 71	3768.50	41.00	•00	•00	•00	•00	111.25
7	FRANKLIN	3595.50	40.00	•00	•00	•00	•00	123.75
STANDARD ERROR OF A VARIETY MEAN		4398.32	55.00	•00	•00	•00	•00	124.55
COEFFICIENT OF VARIATION		153.55	•00	•00	•00	•00	•00	2.85
5% LSD VARIETY MEANS (*****=NS)		6.98%	•00%	•00%	•00%	•00%	•00%	.00%
C O R R E L A T I O N S		(+ - PROB=.05	++ - PROB=.01)					
YIELD KG/HA	1.00	•37+	•00	•00	•00	•00	•00	•67++
DAYS TO FLOWER	•37+	1.00	•00	•00	•00	•00	•00	•19
DAYS TO MATURITY	•00	•00	1.00	•00	•00	•00	•00	.00
NODULE ABUND 1	•00	•00	•00	1.00	•00	•00	•00	.00
NODULE ABUND 2	•00	•00	•00	•00	1.00	•00	•00	.00
NODULE ACT. 1	•00	•00	•00	•00	•00	1.00	•00	.00
NODULE ACT. 2	•00	•00	•00	•00	•00	•00	1.00	.00
PLANT HEIGHT	•67++	•19	•00	•00	•00	•00	•00	-•23
LODGING	•06	•88++	•00	•00	•00	•00	•00	1.00
SHATTER	•00	•00	•00	•00	•00	•00	•00	.00
PLANTS HARVEST	•00	•00	•00	•00	•00	•00	•00	.00
PODS PER PLANT	•78++	•15	•00	•00	•00	•00	•00	•80++
POD HEIGHT	•00	•00	•00	•00	•00	•00	•00	.00
100 SEED WEIGHT	-•48++	-•50++	•00	•00	•00	•00	•00	-•41++
QUALITY OF SEED	•00	•00	•00	•00	•00	•00	•00	.00
PERCENT GERM.	•00	•00	•00	•00	•00	•00	•00	.00

TABLE 116 EXPERIMENT 123 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
11	COLUMBUS	1.00	.00	86.00	.00	16.00	.00
4	JAMES	1.00	.00	75.25	.00	14.00	.00
5	FORREST	1.00	.00	58.25	.00	15.25	.00
1	RILLITO	1.00	.00	68.75	.00	15.75	.00
3	DARE	1.00	.00	59.50	.00	17.50	.00
2	WILLIAMS	1.00	.00	59.50	.00	18.00	.00
9	MICHELL	1.00	.00	60.50	.00	16.00	.00
10	HILL	1.00	.00	56.25	.00	14.25	.00
6	CALLAND	1.00	.00	59.25	.00	19.00	.00
8	CUTLER 71	1.00	.00	56.25	.00	19.50	.00
7	FRANKLIN	1.00	.00	57.25	.00	16.50	.00
STANDARD ERROR OF A VARIETY MEAN							
COEFFICIENT OF VARIATION							
5% LSD VARIETY MEANS (*****=NS)							
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)							
YIELD KG/HA KG/HA FLOWER .00 .00 .78++ .00 -.48++ .00							
DAYS TO Maturity DAYS TO Maturity .00 .00 .15 .00 -.50++ .00							
NODULE ABUND 1 NODULE ABUND 1 .00 .00 .00 .00 .00 .00							
NODULE ABUND 2 NODULE ABUND 2 .00 .00 .00 .00 .00 .00							
NODULE ACT. 1 NODULE ACT. 1 .00 .00 .00 .00 .00 .00							
NODULE ACT. 2 NODULE ACT. 2 .00 .00 .00 .00 .00 .00							
PLANT HEIGHT PLANT HEIGHT .00 .00 .80++ .00 -.41++ .00							
LODGING LODGING .00 .00 -.25 .00 -.33++ .00							
SHATTER SHATTER 1.00 .00 .00 .00 .00 .00							
PLANTS HARVEST PLANTS HARVEST .00 1.00 1.00 .00 .00 .00							
PODS PER PLANT POD HEIGHT .00 .00 1.00 .00 .00 .00							
100 SEED WEIGHT 100 SEED WEIGHT .00 .00 -.32+ .00 .00 .00							
QUALITY OF SEED PERCENT PERCENT GERM. .00 .00 .00 .00 1.00 .00							

TABLE 117 EXPERIMENT 116 YEAR 1978

REGION - MIDDLE EAST
 SITE - ABU-GHRAIB
 LATITUDE - 35 DEG. 3 MIN. N
 COOPERATOR - DR. M.M. ELSAHOOKIE
 DATE PLANTED - MAY 7, 1978
 SOIL TYPE - SAND 19%, SILT 41%, CLAY 26%, PH 7.9
 FERTILIZER USED (KG/HA) - N 25.0, P 25.0, K 25.0
 AMOUNT OF MOISTURE - 1750 MM
 NUMBER OF IRRIGATIONS - 25 (1750 MM)
 SUBSTITUTE VARIETY - LEE

COUNTRY - IRAQ			
ELEVATION - 30 M			
LONGITUDE - 44 DEG. 20 MIN. E			
ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	FLOWER
5	RANSOM	1871.62	82.50
14	LEE	1843.70	80.75
3	BOSSIER	1833.28	83.50
15	COLUMBUS	1758.27	36.00
10	CALLAND	1683.25	34.50
7	FORREST	1574.90	61.25
16	CRAWFORD	1397.36	42.50
8	DAVIS	1322.35	69.50
4	WILLIAMS	1290.26	35.00
12	CUTLER 71	998.12	36.50
11	FRANKLIN	982.28	35.25
13	MITCHELL	949.77	42.25
9	GASOY 17	933.10	85.75
2	RILLITO	919.77	82.25
6	COBB	864.34	81.50
1	IMPROVED PELICAN	295.48	106.75
GRAND MEAN		1282.37	62.23
VARIETY MEAN		168.72	.30
STANDARD ERROR OF A VARIETY MEAN		26.31%	.95%
COEFFICIENT OF VARIATION		480.58	.84
5% LSD VARIETY MEANS (*****NS)		1.90	1.90
CORRELATIONS		(+ - PROB=.05	(+ - PROB=.01)
YIELD	KG/HA	1.00	-.18
	FLOWER	-.18	1.00
DAY TO MATURITY	DAY TO MATURITY	-.10	.96++
NOODLE ABUND 1	NOODLE ABUND 1	.96++	1.00
NOODLE ABUND 2	NOODLE ABUND 2	.00	1.00
NOODLE ACT. 1	NOODLE ACT. 1	.00	1.00
NOODLE ACT. 2	NOODLE ACT. 2	.00	1.00
PLANT HEIGHT	PLANT HEIGHT	-.42++	.58++
LOGGING	LOGGING	-.52++	.55++
SHATTER	SHATTER	.09	-.16
PLANTS HARVEST	PLANTS HARVEST	.19	-.77++
PODS PER PLANT	PODS PER PLANT	.37++	.51++
POD HEIGHT	POD HEIGHT	.00	.00
100 SEED WEIGHT	100 SEED WEIGHT	.73++	-.14
QUALITY OF SEED	QUALITY OF SEED	-.11	-.70++
PERCENT GERM.	PERCENT GERM.	-.21	.45++

TABLE 117 EXPERIMENT 116 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
5 RANSOM	1.00	65.75	12.13	.00	15.78	1.00	83.75	39.3	25.1	
14 LEE	1.25	50.00	20.50	.00	16.78	1.00	40.50	39.8	20.3	
13 BOSSIER	1.00	48.75	12.33	.00	15.55	1.00	32.75	42.6	21.1	
15 COLUMBUS	1.25	97.25	8.05	.00	15.50	2.00	94.75	41.7	23.3	
10 CALLAND	1.25	204.00	5.10	.00	13.53	5.00	19.25	41.7	23.3	
7 FORREST	1.25	124.50	9.33	.00	13.15	3.00	84.25	41.9	22.9	
16 CRAWFORD	1.25	99.25	7.08	.00	13.65	4.00	22.75	40.4	22.8	
8 DAVIS	1.00	84.00	12.65	.00	14.48	2.00	21.25	42.3	21.3	
4 WILLIAMS	1.25	171.00	7.30	.00	13.58	1.00	20.75	44.3	20.6	
12 CUTLER 71	1.25	115.25	6.65	.00	13.03	4.50	32.50	42.2	22.4	
11 FRANKLIN	1.00	165.00	6.70	.00	12.15	5.00	18.25	42.1	21.9	
13 MITCHELL	1.25	107.25	6.90	.00	13.85	5.00	91.25	41.6	22.1	
9 GASOY 17	1.00	43.75	11.65	.00	13.35	1.00	95.50	38.1	22.1	
2 RILLITO	1.25	50.75	12.45	.00	10.28	2.00	96.25	42.4	21.0	
6 COBB	1.25	37.75	10.28	.00	14.15	1.00	91.25	38.1	21.5	
1 IMPROVED PELICAN	1.00	50.75	5.68	.00	9.23	1.00	81.50	37.9	23.7	
STANDARD ERROR OF A VARIETY MEAN	1.16	94.69	9.67	.00	13.63	2.47	57.91			
COEFFICIENT OF VARIATION	.18	11.28	.61	.00	.40	.30	.94			
5% LSD VARIETY MEANS (*****=NS)	31.08%	23.84%	12.59%	.00%	5.93%	24.67%	3.24%			
*****	*****	32.14	1.73	.00	1.15	.87	2.67			
C O R R E L A T I O N S	(+ - PROB=.05	++ - PROB=.01)								
YIELD KG/HA	.09	.19	.37++	.00	.73++	-.11	-.21			
DAYS TO FLOWER	-.16	-.77++	.51++	.00	-.14	-.70++	.45++			
DAYS TO MATURITY	-.15	-.81++	.58++	.00	-.00	-.74++	.50++			
NODULE ABUND 1	.00	.00	.00	.00	.00	.00	.00			
NODULE ABUND 2	.00	.00	.00	.00	.00	.00	.00			
NODULE ACT. 1	.00	.00	.00	.00	.00	.00	.00			
NODULE ACT. 2	.00	.00	.00	.00	.00	.00	.00			
PLANT HEIGHT	-.05	-.38++	-.12	.00	-.51++	-.37++	.39++			
LOGGING	-.04	-.39++	-.08	.00	-.62++	-.28+	.50++			
SHATTER	1.00	.10	.02	.00	.10	.06	.01			
PLANTS HARVEST	.10	1.00	-.54++	.00	-.04	.60++	-.50++			
PODS PER PLANT	.02	-.54++	1.00	.00	.49++	-.55++	.09			
POD HEIGHT	.00	.00	.00	1.00	.00	.00	.00			
100 SEED WEIGHT	.10	-.04	.49++	.00	1.00	-.20	-.16			
QUALITY OF SEED	.06	.60++	-.55++	.00	-.20	1.00	-.32++			
PERCENT GERM.	.01	-.50++	.09	.00	-.16	-.32++	1.00			

TABLE 118 EXPERIMENT 133 YEAR 1978

REGION - MIDDLE EAST
 SITE - RASHIDA
 LATITUDE - 36 DEG. 19 MIN. N
 COOPERATOR - S.D. SULAMAN
 DATE PLANTED - APRIL 16, 1978
 SOIL TYPE - SAND 50%, SILT 30%, CLAY 20%, PH 6.5
 FERTILIZER USED (KG/HA) - N 25.0, P 15.0
 NUMBER OF IRRIGATIONS - 16
 SUBSTITUTE VARIETY - LEE

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE AROUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING	CORRELATIONS (+ - PROB=.05 + + - PROB=.01)	
											GRAND MEAN	STANDARD ERROR OF A VARIETY MEAN
4	BOSSIER	2354.64	93.00	165.75	*00	*00	*00	*00	*00	*00	61.45	1.00
9	FORREST	2087.92	66.00	137.25	*00	*00	*00	*00	*00	*00	44.10	1.00
6	RANSOM	1858.70	88.00	159.75	*00	*00	*00	*00	*00	*00	54.55	1.00
7	LEE	1792.02	88.00	156.00	*00	*00	*00	*00	*00	*00	45.60	1.00
16	BRAGG	1771.19	90.00	159.50	*00	*00	*00	*00	*00	*00	73.00	1.00
12	CALLAND	1702.84	55.75	120.50	*00	*00	*00	*00	*00	*00	55.10	1.00
3	RILLITO	1644.50	94.50	157.75	*00	*00	*00	*00	*00	*00	67.95	1.00
11	GASOY 17	1529.47	90.00	164.75	*00	*00	*00	*00	*00	*00	83.05	1.00
10	DAVIS	1171.07	81.75	147.75	*00	*00	*00	*00	*00	*00	56.30	1.00
8	JAMES	1125.22	60.50	133.50	*00	*00	*00	*00	*00	*00	57.90	1.00
5	RANSOM	998.12	56.75	114.25	*00	*00	*00	*00	*00	*00	46.38	1.00
13	FRANKLIN	950.19	54.50	122.25	*00	*00	*00	*00	*00	*00	44.20	1.00
1	IMPROVED PELICAN	862.67	119.25	170.50	*00	*00	*00	*00	*00	*00	82.28	2.00
14	CUTLER 71	783.49	55.50	117.00	*00	*00	*00	*00	*00	*00	40.20	1.00
2	KAHALA	633.88	65.75	137.25	*00	*00	*00	*00	*00	*00	48.10	1.00
15	MITCHELL	510.52	57.00	126.25	*00	*00	*00	*00	*00	*00	40.50	1.00
SLOPE OF THE REGRESSION LINE												
STANDARD ERROR OF A VARIETY MEAN												
COEFFICIENT OF VARIATION												
5% LSD VARIETY MEANS (*****=NS)												

TABLE 118 EXPERIMENT 133 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
4 BOSSIER	1.00	49.50	162.75	10.50	15.55	1.00	80.00
9 FORREST	2.00	50.75	99.50	14.75	11.68	1.50	73.25
6 RANSOM	1.00	66.00	41.25	14.50	14.98	1.00	87.00
7 LEE	1.75	52.25	70.00	15.50	15.25	1.00	90.25
16 BRAGG	1.00	72.00	39.75	12.25	12.60	1.00	85.75
12 CALLAND	2.25	110.25	54.75	12.75	14.33	2.75	72.50
3 RILLITO	1.00	44.00	49.75	6.50	10.73	1.00	88.00
11 GASOY 17	2.00	52.75	141.75	10.75	13.25	1.00	88.25
10 DAVIS	2.00	49.00	17.25	11.25	13.00	1.00	61.00
8 JAMES	2.75	39.75	69.50	16.50	13.28	1.50	35.00
5 RANSOM	2.75	50.75	71.00	8.75	13.55	2.00	63.50
13 FRANKLIN	2.75	39.00	54.25	8.25	13.00	2.25	47.75
1 IMPROVED FELICAN	1.00	21.75	123.25	19.25	10.18	.75	86.75
14 CUTLER 71	3.50	30.25	50.50	14.75	14.38	2.75	62.00
2 KAHALA	2.50	14.25	100.00	13.25	12.60	3.50	77.75
15 MITCHELL	2.00	17.25	71.25	11.00	14.65	1.50	60.75
GRAND MEAN	1.95	47.47	76.03	12.53	13.31	1.59	72.47
STANDARD ERROR OF A VARIETY MEAN	.21	5.77	18.87	1.09	.78	.21	5.75
COEFFICIENT OF VARIATION	21.18%	24.33%	49.63%	17.36%	11.77%	26.35%	15.86%
5% LSD VARIETY MEANS (*****=NS)	.59	16.45	53.75	3.10	2.23	.60	16.37
C O R R E L A T I O N S	(+ - PROB=.05	+ + - PROB=.01)					
YIELD KG/Ha	-.40++	*.67++	*.16	-.06	*.21	-.40++	*.37++
DAYS TO FLOWER	-.76++	-.03	*.26+	*.20	*.25+	-.67++	.59++
DAYS TO MATURITY	-.77++	*.02	*.30+	*.15	*.15	-.67++	.59++
NODULE ABUND 1	*.00	*.00	*.00	*.00	*.00	*.00	*.00
NODULE ABUND 2	*.00	*.00	*.00	*.00	*.00	*.00	*.00
NODULE ACT. 1	*.00	*.00	*.00	*.00	*.00	*.00	*.00
NODULE ACT. 2	*.00	*.00	*.00	*.00	*.00	*.00	*.00
PLANT HEIGHT	-.47++	*.18	*.27+	*.11	*.33++	-.33++	*.26+
LODGING	-.29+	-.27+	*.24	*.24	*.39++	-.25+	*.20
SHATTER	1.00	-.12	-.16	-.07	*.19	*.59++	-.49++
PLANTS HARVEST	-.12	1.00	-.18	-.10	*.22	*.07	*.18
PLANT PLANT	-.16	-.18	1.00	*.06	*.06	*.05	*.18
PODS PER POD	-.07	-.10	*.06	1.00	-.02	*.07	-.02
100 SEED WEIGHT	.19	*.22	*.06	-.02	1.00	*.01	*.07
QUALITY OF SEED PERCENT	*.59++	-.07	-.05	-.07	-.01	1.00	-.35++
GERM.	-.49++	*.18	*.18	-.02	.07	-.35++	1.00

TABLE 119 EXPERIMENT 124 YEAR 1978

REGION - MIDDLE EAST
 SITE - UNAYZAH, GASSIM
 LATITUDE - 26 DEG. 4 MIN. N
 COOPERATOR - C.A.T.M.
 DATE PLANTED - AUGUST 24, 1978
 SOIL TYPE - SAND 92.9%, SILT 5.35%, CLAY 1.75%
 FERTILIZER USED (KG/HA) N 50, P 60
 AMOUNT OF MOISTURE - 390.0 MM
 NUMBER OF IRRIGATIONS 13 (390.0 MM)

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1		NODULE ABUND 2		PLANT	
					ACT. 1	ACT. 2	ACT. 1	ACT. 2	HEIGHT	LONGING
B	FORREST	1137.73	41.50	99.00	3.00	.00	66.50	.00	45.00	.00
11	ACC 2120	1096.05	37.50	96.50	2.50	.00	62.50	.00	40.00	.00
7	JAMES	1083.55	41.00	104.50	3.00	.00	55.00	.00	38.00	.00
1	CALLAND	993.03	36.00	102.00	1.00	.00	100.00	.00	35.00	.00
2	FRANKLIN	912.68	33.00	88.00	2.50	.00	5.50	.00	37.00	.00
9	DAVIS	854.34	54.50	104.50	1.00	.00	85.00	.00	41.50	.00
14	COBB	850.17	37.50	94.00	1.00	.00	51.00	.00	41.00	.00
13	BOSSIER	821.00	41.00	97.50	3.00	.00	50.00	.00	36.50	.00
12	RILLITO	770.99	37.50	88.00	1.50	.00	80.00	.00	29.00	.00
5	BRAGG	766.82	47.50	102.00	2.50	.00	25.00	.00	34.50	.00
10	IMPROVED FELICAN	716.81	45.00	95.50	3.00	.00	42.50	.00	42.50	.00
4	MITCHELL	675.13	33.00	91.00	2.50	.00	0.00	.00	30.00	.00
3	CUTLER 1	612.62	33.00	92.00	1.00	.00	80.00	.00	34.00	.00
15	RANSOM	575.11	37.50	94.00	2.50	.00	68.50	.00	29.00	.00
14	WILLIAMS	537.61	38.00	93.00	1.00	.00	42.50	.00	30.00	.00
6	GASOY 17	450.09	41.50	97.50	3.00	.00	35.00	.00	30.00	.00
STANDARD ERROR OF A VARIETY MEAN		803.55	39.69	96.19	2.13	.00	53.06	.00	35.81	.00
COEFFICIENT OF VARIATION		169.72	4.96	6.06	1.20	.00	23.92	.00	4.36	.00
5% LSD VARIETY MEANS (*****=NS)		29.87%	17.67%	8.91%	79.68%	.00%	63.76%	.00%	17.23%	.00%
		*****	*****	*****	*****	.00	*****	.00	*****	.00

CORRELATIONS (+ - PROB=.05) (+ - PROB=.01)

YIELD KG/HA	1.00	.01	.19	-.14	.00	*.38+	.00	*.38+	.00	*.70++
DAYS TO FLOWER	.01	1.00	.68++	.22	.00	*.18	.00	*.23	.00	*.20
DAYS TO MATURITY	.19	.68++	1.00	.21	.00	-.41+	.00	-.41+	.00	*.12
NODULE ABUND 1	-.14	.22	.21	1.00	.00	1.00	.00	1.00	.00	-.25
NODULE ABUND 2	.00	.00	.00	.00	1.00	*.00	*.00	*.00	*.00	*.00
NODULE ACT. 1	.38+	.18	.23	-.41+	.00	1.00	.00	1.00	.00	*.35+
NODULE ACT. 2	.00	.00	.00	.00	.00	*.00	*.00	*.00	*.00	*.00
PLANT HEIGHT	.70++	.20	.12	-.25	.00	*.35+	.00	*.35+	.00	*.26
LONGING	.00	.00	.00	.00	.00	*.00	*.00	*.00	*.00	*.46++
SHATTER	.00	.00	.00	.00	.00	*.00	*.00	*.00	*.00	*.19
PLANTS HARVEST	.49++	.07	.20	-.57++	.00	*.30	.00	*.48++	.00	*.23
PODS PER PLANT	.15	-.14	-.31	-.13	.00	-.05	.00	-.05	.00	*.26
POD HEIGHT	.25	.32	.32	-.09	.00	.28	.00	.28	.00	*.46++
100 SEED WEIGHT	.16	-.39+	-.04	-.05	.00	-.10	.00	-.10	.00	*.19
QUALITY OF SEED	-.18	.30	-.03	-.03	.00	.15	.00	.15	.00	*.23
PERCENT GERM.	.00	.00	.00	.00	.00	.00	.00	.00	.00	*.00

TABLE 119 EXPERIMENT 124 YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
8	FORREST	.00	292.00	9.20	6.75	14.40	2.00	.00
11	ACC 2120	.00	251.50	7.50	4.50	15.00	1.50	.00
17	JAMES	.00	294.50	6.10	7.50	16.25	1.00	.00
1	CALLAND	.00	288.00	5.10	5.75	18.55	1.00	.00
2	FRANKLIN	.00	252.50	13.50	4.50	16.40	1.00	.00
9	DAVIS	.00	287.00	5.50	7.50	14.15	2.00	.00
16	COBB	.00	287.50	12.40	7.00	12.75	2.50	.00
13	BOSSIER	.00	211.00	11.40	5.50	13.45	2.50	.00
12	RILLITO	.00	240.50	13.20	5.25	13.00	2.50	.00
5	BRAGG	.00	274.00	6.30	7.50	14.50	2.00	.00
10	IMPROVED PELICAN	.00	260.00	10.60	9.00	11.40	3.00	.00
4	MITCHELL	.00	253.50	5.90	6.00	18.10	1.00	.00
3	CUTLER 71	.00	226.00	5.00	5.25	15.00	2.00	.00
15	RANSOM	.00	221.00	6.00	4.50	15.60	1.50	.00
14	WILLIAMS	.00	285.00	11.70	4.75	17.00	1.00	.00
6	GASOY 17	.00	243.50	7.90	5.50	14.25	2.00	.00
	GRAND MEAN	.00	260.47	8.58	6.05	14.99	1.78	.00
	STANDARD ERROR OF A VARIETY MEAN	.00	30.96	3.46	1.22	.72	.29	.00
	5% LSD COEFFICIENT OF VARIATION	.00%	16.81%	57.07%	28.54%	6.81%	22.78%	.00%
	5% LSD VARIETY MEANS (*****=NS)	.00	*****	*****	*****	2.18	.86	.00

CORRELATIONS

(+ - PROB=.05

++ - PROB=.01)

YIELD KG/Ha	.00	*49++	.15	.25	*16	-.18	.00
DAYS TO FLOWER	.00	.07	-.14	.32	-.39+	.30	.00
DAYS TO MATURITY	.00	.20	-.31	.32	-.04	-.03	.00
NOODE ABUND 1	.00	-.57++	-.13	-.09	-.05	-.03	.00
NOODE ABUND 2	.00	.00	.00	.00	.00	.00	.00
NOODE ACT. 1	.00	.30	-.05	.28	-.10	.15	.00
NOODE ACT. 2	.00	.00	.00	.00	.00	.00	.00
PLANT HEIGHT	.00	.48++	.26	.46++	-.19	.23	.00
LODGING	.00	.00	.00	.00	.00	.00	.00
SHATTER	1.00	.00	.00	.00	.00	.00	.00
PLANTS HARVEST	.00	1.00	.16	.50++	.11	-.10	.00
PODS PER PLANT	.00	.16	1.00	.05	-.27	.13	.00
POD HEIGHT	.00	*50++	.05	1.00	-.36+	.39+	.00
100 SEED WEIGHT	.00	.11	-.27	-.36+	1.00	-.89++	.00
QUALITY OF SEED	.00	-.10	.13	.39+	-.89++	1.00	.00
PERCENT GERM.	.00	.00	.00	.00	.00	.00	1.00

TABLE 120 EXPERIMENT 159

YEAR 1978

REGION - MIDDLE EAST
 SITE - UNAYZAH
 LATITUDE - 26 DEG. 4 MIN. N
 COOPERATOR - CATM
 DATE PLANTED - MARCH 3, 1979
 SOIL TYPE - SAND 82.5%, SILT 12.8%, CLAY 4.7%, FH 8.0
 FERTILIZER USED - N 81.0, P 81.0, K 22.5
 AMOUNT OF MOISTURE - 318 MM
 NUMBER OF IRRIGATIONS - 20 (300 MM)

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
10	CALLAND	2112.50	45.00	107.00	1.25	1.00	90.00	95.00	43.75	.00
8	DAVIS	2068.75	57.25	142.00	2.75	1.75	88.75	87.50	54.25	.00
13	MITCHELL	1956.25	46.00	102.00	2.00	1.25	93.75	92.50	44.00	.00
7	FORREST	1950.00	55.00	126.25	4.50	1.75	85.00	87.50	50.50	.00
12	CUTLER 71	1856.25	46.00	110.00	1.25	1.00	97.50	96.25	47.75	.00
11	FRANKLIN	1800.00	44.25	104.75	1.00	1.00	95.00	96.25	43.25	.00
15	CRAWFORD	1768.75	47.50	110.00	2.50	2.00	83.75	88.75	45.50	.00
4	RANSOM	1756.25	50.50	119.00	1.75	1.25	88.75	87.50	49.75	.00
3	WILLIAMS	1737.50	45.75	99.50	1.75	1.25	97.50	97.50	45.00	.00
6	JAMES	1606.25	53.00	112.00	1.75	1.25	96.25	91.25	49.75	.00
1	RILLITO	1200.00	62.25	141.75	2.50	1.50	88.75	95.00	61.50	.00
9	GASOY 17	1031.25	51.25	157.00	1.75	1.00	97.50	97.50	47.50	.00
14	BRAGG	818.75	54.50	143.00	2.75	1.25	86.25	91.25	52.50	.00
5	COBB	756.25	56.00	157.00	3.50	2.00	73.75	85.00	52.75	.00
2	BOSSIER	534.37	51.25	157.00	2.50	1.50	85.00	90.00	50.75	.00
GRAND MEAN		1530.21	51.07	125.88	2.23	1.38	89.83	91.92	49.23	*.00
STANDARD ERROR OF A VARIETY MEAN		159.15	.78	3.69	.57	.30	6.21	3.68	1.45	*.00
COEFFICIENT OF VARIATION		20.80%	3.06%	5.86%	51.46%	44.06%	13.82%	8.01%	5.87%	*.00%
5% LSD VARIETY MEANS (*****=NS)		454.21	2.23	10.52	1.64	*****	*****	*****	4.13	.00

CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)

YIELD KG/HA	1.00	-.40++	-.68++	-.19	-.09	+.27+	.18	-.45++	*.00
DAYS TO FLOWER	-.40++	1.00	.70++	.46++	.32+	-.29+	.28+	.78++	.00
DAYS TO MATURITY	-.68++	.70++	1.00	.36++	.26+	.32+	.25	.55++	.00
NODULE ABUND 1	-.19	.46++	.36++	1.00	.71++	-.58++	.52++	.37++	.00
NODULE ABUND 2	-.09	.32+	.26+	.71++	1.00	-.68++	.59++	.24	.00
NODULE ACT. 1	.27+	-.29+	-.32+	-.58++	-.68++	1.00	.72++	.22	.00
NODULE ACT. 2	.18	-.28+	-.25	-.52++	-.59++	.72++	1.00	.22	.00
PLANT HEIGHT	-.45++	.78++	.55++	.37++	.24	-.22	.22	1.00	.00
LOGGING	.00	.00	.00	.00	.00	.00	.00	.00	1.00
SHATTER	.00	.00	.00	.00	.00	.00	.00	.00	.00
PLANTS HARVEST	.37++	-.43++	-.53++	-.22	-.27+	.32+	.31+	-.38++	.00
PODS PER PLANT	.19	.21	.23	.27+	.21	-.02	-.05	.08	.00
POD HEIGHT	.01	.56++	.35++	.13	.11	-.05	.04	.30+	.00
100 SEED WEIGHT	.79++	-.45++	-.78++	-.14	-.03	.16	.12	-.41++	.00
QUALITY OF SEED	-.72++	.41++	.70++	.06	.04	-.11	-.02	.30+	.00
PERCENT GERM.	.65++	-.38++	-.67++	-.13	-.09	.19	.09	-.34++	.00

TABLE 120 EXPERIMENT 159 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
10	CALLAND	.00	221.00	21.75	5.43	19.25	1.00	97.25	41.7
8	DAVIS	.00	109.00	32.75	7.50	16.00	2.50	82.00	41.6
13	MITCHELL	.00	138.25	23.75	5.70	18.75	2.00	94.50	38.9
7	FORREST	.00	188.00	38.25	5.90	18.25	2.00	91.50	41.6
12	CUTLER 71	.00	168.75	31.50	5.88	18.00	2.25	92.75	43.1
11	FRANKLIN	.00	183.75	22.25	5.13	17.75	2.25	90.25	42.3
15	CRAWFORD	.00	147.75	30.50	5.38	18.00	2.00	93.00	41.6
4	RANSOM	.00	123.50	26.75	5.30	17.25	2.25	88.50	40.8
3	WILLIAMS	.00	230.00	25.75	5.38	17.50	2.25	91.00	42.5
6	JAMES	.00	144.00	28.00	6.95	17.50	2.00	88.75	40.1
1	RILLITO	.00	119.00	29.50	7.60	15.50	3.25	85.25	40.5
9	GASOY 17	.00	136.25	30.75	5.88	11.75	4.25	64.25	42.2
14	BRAGG	.00	160.75	20.50	6.63	10.00	5.00	44.00	41.7
5	COBB	.00	103.75	28.75	7.25	14.25	3.50	69.50	41.0
2	BOSSIER	.00	100.50	35.50	5.33	11.75	4.75	59.50	41.6
	GRAND MEAN	.00	151.62	28.42	6.08	16.10	2.75	82.13	
	STANDARD ERROR OF A VARIETY MEAN	.00	23.59	4.66	.52	.43	.29	4.27	
	COEFFICIENT OF VARIATION	.00%	31.12%	32.76%	17.15%	5.34%	20.99%	10.40%	
	5% LSD VARIETY MEANS (*****NS)	.00	67.33	*****	1.49	1.23	.82	12.19	

C O R R E L A T I O N S
 (+ - PROB=.05 ++ - PROB=.01)

YIELD	KG/HA	.00	*37++	*19	.01	.79++	-.72++	.65++
DAYS TO FLOWER	.00	-*43++	*21	*56++	-.45++	*41++	-.38++	
DAYS TO MATURITY	.00	-*53++	*23	*35++	-.78++	*70++	-.67++	
MODULE ABUND 1	.00	*22	*27+	*13	-.14	*06	-.13	
MODULE ABUND 2	.00	-*27+	*21	*11	-.03	*04	-.09	
MODULE ACT. 1	.00	*32+	-.02	-.05	*16	-.11	*19	
MODULE ACT. 2	.00	*31+	-.05	*04	*12	-.02	*09	
PLANT HEIGHT	.00	-*38++	*08	*30+	-*41++	*30+	-*34++	
LODGING	.00	*00	*00	*00	*00	*00	*00	
SHATTER	1.00	*00	*00	*00	*00	*00	*00	
PLANTS HARVEST	.00	1.00	-.20	-.23	*33++	-.36++	*34++	
PODS PER PLANT	.00	-.20	1.00	*31+	*05	-.01	-.01	
POD HEIGHT	.00	-.23	*31+	1.00	-.13	*12	-.16	
100 SEED WEIGHT	.00	*33++	*05	-.13	1.00	-.90++	*90++	
QUALITY OF SEED	.00	-.36++	-.01	*12	-.90++	1.00	-.85++	
PERCENT GERM.	.00	*34++	-.01	-.16	*90++	-.85++	1.00	

TABLE 121

EXPERIMENT 218

YEAR 1978

REGION - MIDDLE EAST

SITE - ADANA

LATITUDE - 37 DEG. 19 MIN. N ELEVATION - 90 M

COOPERATORS - DR. İBRAHİM ATAKISI, H. HALİS ARIÖFLÜ

DATE PLANTED - JUNE 27, 1978 DATE HARVESTED - SEPTEMBER, 1978

SOIL TYPE - SAND 34.4%, SILT 40.2%, CLAY 25.4%, PH 7.5

FERTILIZER USED (KG/HA) - N 25.0, P 25.0

AMOUNT OF MOISTURE - 411 MM

NUMBER OF IRRIGATIONS - 4 (100 MM)

COUNTRY - TURKEY

ELEVATION - 90 M

LONGITUDE - 35 DEG. 15 MIN. E

HALİS ARIÖFLÜ

DATE HARVESTED - SEPTEMBER, 1978

SOIL TYPE - SAND 34.4%, SILT 40.2%, CLAY 25.4%, PH 7.5

FERTILIZER USED (KG/HA) - N 25.0, P 25.0

AMOUNT OF MOISTURE - 411 MM

NUMBER OF IRRIGATIONS - 4 (100 MM)

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LONGING	CORRELATIONS (+ - PROB=.05 + - PROB=.01)	
											+	+
2	CALLAND	2167.08	30.00	94.00	.00	.00	.00	.00	.00	.00	85.52	1.00
14	CORSOY	1913.43	31.00	88.00	.00	.00	.00	.00	.00	.00	59.70	1.00
5	MICHELL	1845.55	30.00	91.00	.00	.00	.00	.00	.00	.00	85.38	1.00
9	HARCOR	1819.12	30.00	87.00	.00	.00	.00	.00	.00	.00	67.55	1.00
10	HODGSON	1575.12	29.00	85.00	.00	.00	.00	.00	.00	.00	60.68	1.00
3	FRANKLIN	1562.97	31.00	91.00	.00	.00	.00	.00	.00	.00	85.15	1.00
12	COLUMBUS	1501.88	33.00	94.00	.00	.00	.00	.00	.00	.00	84.95	1.00
8	STEELE	1404.35	30.00	81.00	.00	.00	.00	.00	.00	.00	61.68	1.00
15	EVANS	1377.91	33.00	91.00	.00	.00	.00	.00	.00	.00	83.87	1.00
16	CRAWFORD	1363.62	24.00	85.00	.00	.00	.00	.00	.00	.00	53.18	1.00
4	CUTLER 71	1333.97	31.00	94.00	.00	.00	.00	.00	.00	.00	88.15	1.00
1	WILLIAMS	1132.48	31.00	81.00	.00	.00	.00	.00	.00	.00	74.53	1.00
11	ELF	1121.41	30.00	85.00	.00	.00	.00	.00	.00	.00	34.48	1.00
17	AMSOY 71	1104.62	30.00	85.00	.00	.00	.00	.00	.00	.00	63.88	1.00
6	ALTONA	956.36	24.00	68.50	.00	.00	.00	.00	.00	.00	58.00	1.00
13	UNION	907.06	31.00	85.00	.00	.00	.00	.00	.00	.00	76.18	1.00
7	SWIFT	769.16	24.00	71.00	.00	.00	.00	.00	.00	.00	58.08	1.00
GRAND MEAN		1403.30	29.53	85.68	.00	.00	.00	.00	.00	.00	69.47	1.00
STANDARD ERROR OF A VARIETY MEAN		77.81	.00	.61	.00	.00	.00	.00	.00	.00	1.67	.00
COEFFICIENT OF VARIATION		11.09%	.00%	1.42%	.00%	.00%	.00%	.00%	.00%	.00%	4.82%	.00%
5% LSD VARIETY MEANS (*****=NS)		221.24	.00	1.72	.00	.00	.00	.00	.00	.00	4.76	.00

TABLE 121 EXPERIMENT 218 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	PODS PER PLANT	HEIGHT	POD 100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
2	CALLAND	1.00	208.25	30.43	12.98	16.70	3.75	100.00	39.4
14	CORSOY	1.00	204.25	44.60	7.80	13.50	3.00	100.00	38.3
5	MITCHELL	1.00	158.25	41.93	10.90	13.90	3.00	100.00	37.6
9	HARCOR	1.00	193.00	40.70	6.30	13.50	3.00	100.00	36.2
10	HODGSON	1.00	187.50	31.43	7.50	12.90	3.00	100.00	34.8
3	FRANKLIN	1.00	153.75	31.48	11.23	14.00	3.00	100.00	37.0
12	COLUMBUS	1.00	182.50	34.05	13.10	14.90	3.00	100.00	42.2
8	STEELE	1.00	194.50	30.20	7.30	14.83	4.00	100.00	38.6
15	EVANS	1.00	153.50	22.80	11.10	13.40	3.25	100.00	41.1
16	CRAWFORD	1.00	186.25	34.93	5.83	12.40	3.75	100.00	38.4
4	CUTLER 71	1.00	168.75	26.90	12.75	16.80	3.00	100.00	40.0
1	WILLIAMS	1.00	205.75	26.60	11.25	12.50	3.75	100.00	41.0
11	ELF	1.00	179.00	28.25	7.45	12.70	3.50	100.00	38.5
17	AMSOY 71	1.00	171.75	65.98	9.55	13.90	3.75	100.00	38.2
6	ALTONA	1.00	201.25	22.80	10.35	13.10	4.00	100.00	43.4
13	UNION	1.00	173.00	27.50	9.48	13.10	4.75	100.00	40.9
7	SWIFT	1.00	192.00	32.35	6.45	9.40	3.25	100.00	37.6
GRAND MEAN									
STANDARD ERROR OF A VARIETY MEAN									
COEFFICIENT OF VARIATION									
5% LSD VARIETY MEANS (*****=NS)									
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)									
YIELD KG/HA									
DAYS TO FLOWER									
DAYS TO MATURITY									
NODULE ABUND 1									
NODULE ABUND 2									
NODULE ACT. 1									
NODULE ACT. 2									
PLANT HEIGHT									
LODGING									
SHATTER									
PLANTS HARVEST									
PODS PER PLANT									
POD HEIGHT									
100 SEED WEIGHT									
QUALITY OF SEED									
PERCENT GERM.									

TABLE 122 EXPERIMENT 214 YEAR 1978

REGION - NORTH AMERICA
 SITE - URBANA, ILLINOIS
 LATITUDE - 40 DEG. 7 MIN. N
 COOPERATOR - INTSOY
 DATE PLANTED - MAY 27, 1978
 SOIL TYPE - FLANTIGAN B 0, SILT LOAM, PH 7.3
 AMOUNT OF MOISTURE - 428 MM

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
14	CORSOY	3618.64	26.75	105.00	.00	.00	.00	.00	101.25	4.25
10	HODGSON	3361.09	26.25	82.00	.00	.00	.00	.00	84.50	3.75
1	WILLIAMS	3344.42	34.00	119.00	.00	.00	.00	.00	103.25	2.75
9	HARCOR	3264.40	28.25	103.75	.00	.00	.00	.00	100.00	4.25
4	CUTLER 71	3223.98	34.75	118.50	.00	.00	.00	.00	123.00	2.25
13	UNION	3179.39	34.75	121.00	.00	.00	.00	.00	120.00	2.75
11	ELF	3115.62	33.25	116.00	.00	.00	.00	.00	52.50	1.00
8	STEELE	2820.56	21.50	82.00	.00	.00	.00	.00	88.75	3.75
5	MICHELL	2773.05	37.25	122.00	.00	.00	.00	.00	112.50	4.00
15	EVANS	2740.55	42.50	129.75	.00	.00	.00	.00	116.25	4.00
7	SWIFT	2684.29	24.00	92.00	.00	.00	.00	.00	86.25	5.00
2	CALLAND	2536.76	30.25	117.75	.00	.00	.00	.00	107.50	3.50
3	FRANKLIN	2446.74	36.25	125.25	.00	.00	.00	.00	110.00	3.25
12	COLUMBUS	2432.57	38.50	135.00	.00	.00	.00	.00	109.25	4.00
16	CRAWFORD	2363.81	21.00	87.00	.00	.00	.00	.00	76.25	3.50
6	ALTONA	1566.98	21.50	79.00	.00	.00	.00	.00	72.50	4.75
STANDARD ERROR OF A VARIETY MEAN		2842.05	30.67	108.44	.00	.00	.00	.00	97.73	3.55
COEFFICIENT OF VARIATION		222.29	1.09	1.48	.00	.00	.00	.00	4.07	.31
5% LSD VARIETY MEANS (*****NS)		15.642	7.122	2.732	.00%	.00%	.00%	.00%	8.322	17.31%
		633.17	3.11	4.22	.00	.00	.00	.00	11.58	.87
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)										
YIELD KG/HA	1.00	*1.12	*1.1	*.89++	*.00	*.00	*.00	*.00	*.21	-.34++
DAYS TO FLOWER	*.12	1.00	*.89++	1.00	*.00	*.00	*.00	*.00	*.55++	-.29+
DAYS TO MATURITY	*.11	*.89++	*.00	*.00	1.00	*.00	*.00	*.00	*.59++	-.31+
NODULE ABUND 1	*.00	*.00	*.00	*.00	*.00	1.00	*.00	*.00	*.00	*.00
NODULE ABUND 2	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00
NODULE ACT. 1	*.00	*.00	*.00	*.00	*.00	*.00	1.00	*.00	*.00	*.00
NODULE ACT. 2	*.00	*.00	*.00	*.00	*.00	*.00	*.00	1.00	*.00	*.00
PLANT HEIGHT	*.21	*.55++	*.59++	*.00	*.00	*.00	*.00	*.00	*.00	*.00
LOGGING	-.34++	-.29+	-.31+	*.00	*.00	*.00	*.00	*.00	*.08	1.00
SHATTER	-.45++	-.60++	-.71++	*.00	*.00	*.00	*.00	*.00	-.45++	*.42++
PLANTS HARVEST	*.33++	*.01	*.03	*.00	*.00	*.00	*.00	*.00	*.07	-.15
PODS PER PLANT	*.21	*.22	*.16	*.00	*.00	*.00	*.00	*.00	*.12	-.00
POD HEIGHT	*.17	*.62++	*.65++	*.00	*.00	*.00	*.00	*.00	*.66++	-.22
100 SEED WEIGHT	*.32++	-.00	-.06	*.00	*.00	*.00	*.00	*.00	*.18	-.34++
QUALITY OF SEED	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00
PERCENT GERM.	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00

TABLE 122 EXPERIMENT 214 YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
14	CORSOY	1.25	128.50	50.65	10.63	16.95	.00	.00
10	HODGSON	2.00	110.25	47.50	7.73	18.53	.00	.00
1	WILLIAMS	1.00	152.25	28.05	12.85	20.58	.00	.00
9	HARCOR	1.25	142.00	34.80	5.85	16.48	.00	.00
4	CUTLER 71	1.00	117.25	43.50	17.98	20.60	.00	.00
13	UNION	1.00	139.75	38.20	12.93	20.93	.00	.00
11	ELF	1.00	110.25	43.15	6.55	17.50	.00	.00
8	STEELE	1.50	98.00	36.15	6.03	18.50	.00	.00
5	MITCHELL	1.00	100.50	42.50	12.75	16.28	.00	.00
15	EVANS	1.00	98.25	51.85	14.53	17.43	.00	.00
7	SWIFT	2.25	119.00	36.20	7.50	17.20	.00	.00
2	CALLAND	1.00	125.25	32.55	13.60	18.00	.00	.00
3	FRANKLIN	1.00	112.00	44.35	11.70	16.60	.00	.00
12	COLUMBUS	1.00	90.00	45.50	13.53	15.00	.00	.00
16	CRAWFORD	1.75	107.50	36.80	6.18	16.78	.00	.00
6	ALTONA	4.00	109.50	31.50	5.25	18.08	.00	.00
	GRAND MEAN	1.44	116.27	40.20	10.35	17.84	.00	.00
	STANDARD ERROR OF A VARIETY MEAN	.14	11.44	5.88	1.38	.44	.00	.00
	COEFFICIENT OF VARIATION	19.74%	19.67%	29.24%	26.64%	4.95%	.00%	.00%
	5% LSD VARIETY MEANS (*****NS)	.40	32.57	*****	3.92	1.26	.00	.00

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 YIELD KG/HA
 DAYS TO FLOWER
 DAYS TO MATURITY
 NODULE ABUND 1
 NODULE ABUND 2
 NODULE ACT. 1
 NODULE ACT. 2
 PLANT HEIGHT
 LODGING
 SHATTER
 PLANTS HARVEST
 PODS PER PLANT
 POD HEIGHT
 100 SEED WEIGHT
 QUALITY OF SEED
 PERCENT GERM.

(++ - PROB=.05

++ - FROB=.01)

YIELD	KG/HA	-.45++	.33++	.21	.17	.32++	.00	.00
DAYS TO FLOWER		-.60++	.01	.22	.62++	-.00	.00	.00
DAYS TO MATURITY		-.71++	.03	.16	.65++	-.06	.00	.00
NODULE ABUND 1		*.00		.00	*.00		.00	.00
NODULE ABUND 2		*.00		.00	*.00		.00	.00
NODULE ACT. 1		*.00		.00	*.00		.00	.00
NODULE ACT. 2		*.00		.00	*.00		.00	.00
PLANT HEIGHT		-.45++	.07	.12	.66++	*.18	.00	.00
LODGING		*.42++	-.15	-.00	-.22	-.34++	.00	.00
SHATTER		1.00	-.06	-.14	-.45++	-.07	.00	.00
PLANTS HARVEST		-.06	1.00	-.47++	.10	*.24	.00	.00
PODS PER PLANT		-.14	-.47++	1.00	-.03	-.17	.00	.00
POD HEIGHT		-.45++	.10	-.03	1.00	*.19	.00	.00
100 SEED WEIGHT		-.07	.24	-.17	.19	1.00	.00	.00
QUALITY OF SEED		*.00	.00	.00	*.00	1.00	.00	.00
PERCENT GERM.		*.00	.00	.00	*.00	.00	1.00	.00

TABLE 123 EXPERIMENT 99 YEAR 1978

REGION - OCEANIA COUNTRY - FIJI
 SITE - NAISELESELE ELEVATION - 50 M
 LATITUDE - 16 DEG. 40 MIN. S LONGITUDE - 178 DEG. 45 MIN. E
 COOPERATORS - N. PRASAD, R. VINEY
 DATE PLANTED - FEBRUARY 15, 1978 DATE HARVESTED - JUNE, 1978
 SOIL TYPE - SANDY LOAM, TALASIGA SOIL, SAND 70%, SILT 22%, CLAY 8%, PH 4.5
 FERTILIZER USED (KG/HA) - N 25.0, P 24.0, K 20.8

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LONGING
2	ORBA	1935.36	41.00	98.00	2.50	2.50	98.75	100.00	91.75	5.00
6	IMPROVED PELICAN	1799.82	41.00	107.00	3.50	3.00	100.00	100.00	87.60	1.50
7	RILLITO	1733.16	28.00	107.00	2.00	1.50	100.00	100.00	64.95	1.75
1	HARDEE LS	1610.95	49.00	112.25	3.25	2.50	100.00	100.00	60.08	1.00
5	JUPITER	1495.96	41.00	110.50	3.50	2.50	96.25	100.00	56.20	1.00
3	IAC-2	1437.08	41.00	109.25	3.00	2.00	100.00	100.00	79.00	1.25
4	CARIBE	1437.08	28.00	114.00	3.00	3.50	100.00	100.00	109.08	3.25
GRAND MEAN		1635.63	38.43	108.29	2.96	2.61	99.29	100.00	78.38	2.11
STANDARD ERROR OF A VARIETY MEAN		229.29	.00	1.25	.32	.34	1.06	.00	2.92	.24
COEFFICIENT OF VARIATION		28.04%	.00%	2.31%	21.57%	26.14%	2.13%	.00%	7.46%	23.16%
5% LSD VARIETY MEANS (*****=NS)		*****	.00	3.72	.95	1.01	*****	.00	8.69	.72
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD KG/HA	1.00	.05	-.24	.01	.15	.01	.00	.00	-.04	.12
DAYS TO FLOWER	.05	1.00	-.10	.35	.04	-.12	.00	.00	-.40+	-.26
DAYS TO MATURITY	-.24	-.10	1.00	.23	.14	.00	.00	.00	-.17	-.57+
NODULE ABUND 1	.01	*.35	*.23	1.00	.66++	*.01	*.00	*.00	-.11	-.39+
NODULE ABUND 2	.15	.04	*.14	.66++	1.00	-.23	*.00	*.00	*.27	*.06
NODULE ACT. 1	.01	-.12	.00	-.01	-.23	1.00	*.00	*.00	*.30	*.02
NODULE ACT. 2	.00	.00	.00	.00	.00	*.00	1.00	1.00	*.00	*.00
PLANT HEIGHT	-.04	-.40+	-.17	-.11	.27	*.30	*.00	*.00	1.00	*.68+
LODGING	.12	*.26	-.57++	-.39+	.06	*.02	*.00	*.00	*.68++	1.00
SHATTER	-.17	-.45+	.41+	.03	.25	*.19	*.00	*.00	*.46+	*.19
HARVEST	.03	-.52++	-.25	-.16	.32	-.13	*.00	*.00	*.63++	*.60++
PLANTS PER PLANT	.30	*.61++	.20	.14	-.14	*.17	*.00	*.00	-.30	-.19
POD HEIGHT	-.34	-.10	*.42+	.27	.34	*.33	*.00	*.00	*.56++	-.03
100 SEED WEIGHT	-.03	*.24	*.45+	-.02	-.30	-.29	*.00	*.00	-.72++	-.62++
QUALITY OF SEED	-.44+	-.49++	.37	-.29	.03	-.14	*.00	*.00	*.10	*.16
PERCENT GERM.	-.09	*.29	.33	.37	*.44+	*.22	*.00	*.00	*.52++	*.08

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TABLE 123 EXPERIMENT 99 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
2	ORBA	1.00	81.25	12.33	2.10	13.25	2.75	42.50	44.4	20.0
6	IMPROVED PELICAN	1.25	76.50	7.95	6.15	15.25	1.75	57.75	45.4	19.4
7	RILLITO	1.25	55.50	7.70	5.58	17.75	3.75	21.50	47.0	22.6
1	HARDEE LS	1.25	11.25	23.27	6.00	18.38	3.00	59.25	45.2	20.2
5	JUPITER	1.00	64.75	7.31	2.08	19.50	4.00	33.00	46.5	18.7
3	IAC-2	1.00	34.25	16.31	5.70	17.00	2.75	45.00	45.1	20.2
4	CARIBE	2.00	91.25	7.32	9.93	13.50	4.75	62.75	48.7	15.2
STANDARD ERROR OF A VARIETY MEAN		GRAND MEAN	1.25	59.25	11.74	4.79	16.38	3.25	45.96	
COEFFICIENT OF VARIATION		MEAN	.16	6.28	1.93	.77	1.18	.42	1.14	
5% LSD VARIETY MEANS (*****=NS)		VARIATION	25.70%	21.19%	32.94%	32.09%	14.39%	25.64%	4.95%	
		MEANS	.48	18.65	5.75	2.28	3.50	1.24	3.38	
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	-.17	.03	.30	-.34	-.03	-.44+	-.09		
DAYS TO FLOWER	-45+	-.52++	.61++	-.10	.24	.24	-.49++	.29		
DAYS TO MATURITY	.41+	-.25	.20	.42+	.45+	.37	.33			
NODULE ABUND 1	.03	-.16	.14	.27	-.02	-.29	.37			
NODULE ABUND 2	.25	.32	-.14	.34	-.30	.03				
NODULE ACT. 1	.19	-.13	.17	.33	-.29	-.14				
NODULE ACT. 2	.00	.00	.00	.00	.00	.00				
PLANT HEIGHT	.46+	.63++	-.30	.56++	-.72++	.10	.52++			
LODGING	.19	.60++	-.19	-.03	-.62++	.16	.08			
SHATTER	1.00	.30	-.22	.46+	-.17	.45+				
PLANTS HARVEST	.30	1.00	-.68++	.02	-.53++	.25	.03			
PODS PER PLANT	-.22	-.68++	1.00	-.01	.32	-.34	.25			
POD HEIGHT	.46+	.02	-.01	1.00	-.37	.04	.79++			
100 SEED WEIGHT	-.17	-.53++	.32	-.37	1.00	.11	-.34			
QUALITY OF SEED	.45+	.25	-.34	.04	.11	1.00	-.12			
PERCENT GERM.	.38+	.03	.25	.79++	-.34	-.12	1.00			

TABLE 124 EXPERIMENT 11 YEAR 1978

REGION - OCEANIA
 SITE - PAPARA COOPERATORS - R. YAU, JEAN LOUIS REBOUL
 LATITUDE - 17 DEG. 30 MIN. S LONGITUDE - 149 DEG. 30 MIN. W
 SOIL TYPE - SAND 42%, SILT 30%, CLAY 14%, PH 7.4
 FERTILIZER USED (KG/HA) - N 25.0, P 25.0, K 25.0
 DATE PLANTED - MAY 24, 1978 DATE HARVESTED - SEPTEMBER, 1978
 AMOUNT OF MOISTURE - 991 MM

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING	C O R R E L A T I O N S	
											(+ - PROB=.05	(+ - PROB=.01)
9	JUPITER	2781.18	44.00	105.00	.00	.00	.00	.00	.00	.00	.00	.00
4	HARDEE LS	2546.93	50.00	105.00	.00	.00	.00	.00	.00	.00	.00	.00
7	TUNIA	2127.47	42.00	105.00	.00	.00	.00	.00	.00	.00	.00	.00
13	BOSSIER	1968.27	42.00	95.25	.00	.00	.00	.00	.00	.00	.00	.00
3	SJ-2	1940.55	42.00	97.00	.00	.00	.00	.00	.00	.00	.00	.00
11	KAHALA	1862.66	42.00	97.00	.00	.00	.00	.00	.00	.00	.00	.00
12	RILLITO	1809.03	33.00	95.25	.00	.00	.00	.00	.00	.00	.00	.00
1	CH-3	1808.78	42.00	105.00	.00	.00	.00	.00	.00	.00	.00	.00
10	IMPROVED PELICAN	1795.03	37.00	90.00	.00	.00	.00	.00	.00	.00	.00	.00
14	WILLIAMS	1783.61	35.25	90.00	.00	.00	.00	.00	.00	.00	.00	.00
6	IAC-2	1773.06	42.00	101.00	.00	.00	.00	.00	.00	.00	.00	.00
8	CARIBE	1675.71	39.75	90.00	.00	.00	.00	.00	.00	.00	.00	.00
5	ORBA	1599.61	34.75	90.00	.00	.00	.00	.00	.00	.00	.00	.00
2	UFU-3	1478.67	35.25	99.00	.00	.00	.00	.00	.00	.00	.00	.00
15	RANSOM	1351.06	33.00	105.00	.00	.00	.00	.00	.00	.00	.00	.00
16	COBB	1090.05	33.00	105.00	.00	.00	.00	.00	.00	.00	.00	.00
STANDARD ERROR OF A VARIETY MEAN												
COEFFICIENT OF VARIATION												
5% LSD VARIETY MEANS (*****=NS)												
CORRELATIONS												
YIELD KG/HA	1.00	*55++	*19	.00	.00	.00	.00	.00	.00	.00	.00	.00
DAYS TO FLOWER	*.55++	1.00	*.28+	.00	.00	.00	.00	.00	.00	.00	.00	.00
DAYS TO MATURITY	*.19	*.28+	1.00	.00	.00	.00	.00	.00	.00	.03	.03	.01
NODULE ABUND 1	*.00	*.00	*.00	1.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ABUND 2	*.00	*.00	*.00	*.00	1.00	.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 1	*.00	*.00	*.00	*.00	*.00	1.00	.00	.00	.00	1.00	.00	.00
NODULE ACT. 2	*.00	*.00	*.00	*.00	*.00	*.00	1.00	.00	.00	1.00	.00	.00
PLANT HEIGHT	*.57++	*.52++	*.03	*.00	*.00	*.00	*.00	*.00	*.00	1.00	.00	.00
LOGGING	*.38++	*.38++	*.01	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00
SHATTER	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00
PLANTS HARVEST	*.21	*.17	-.11	*.00	*.00	*.00	*.00	*.00	*.00	*.23	*.23	*.21
PODS PER PLANT	*.46++	*.46++	*.44++	*.00	*.00	*.00	*.00	*.00	*.00	*.62++	*.62++	*.38++
POD HEIGHT	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00
100 SEED WEIGHT	*.13	*.10	*.28+	*.00	*.00	*.00	*.00	*.00	*.00	-.12	-.12	-.07
QUALITY OF SEED	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00
PERCENT GERM.	*.04	*.02	*.43++	*.00	*.00	*.00	*.00	*.00	*.00	*.29+	*.29+	*.22

TABLE 124 EXPERIMENT 11 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
9	JUPITER	1.00	163.50	28.60	.00	22.40	1.00	80.00	44.7
4	HARDEE LS	1.00	185.25	29.00	.00	20.33	1.00	70.75	46.2
7	TUNIA	1.00	132.00	24.00	.00	25.43	1.00	75.50	44.9
13	BOSSIER	1.00	156.50	17.75	.00	20.95	1.00	73.25	46.0
3	SJ-2	1.00	165.25	22.75	.00	16.85	1.00	85.00	45.7
11	KAHALA	1.00	178.50	14.75	.00	25.80	1.00	73.00	45.5
12	RILLITO	1.00	151.00	16.75	.00	20.33	1.00	83.25	46.2
1	CH-3	1.00	146.50	34.25	.00	19.93	1.00	92.75	43.8
10	IMPROVED FELICAN	1.00	191.25	15.75	.00	17.90	1.00	93.50	47.3
14	WILLIAMS	1.00	184.75	13.00	.00	24.08	1.00	87.00	43.3
6	IAC-2	1.00	163.75	18.75	.00	21.85	1.00	74.25	46.0
8	CARIBE	1.00	146.00	18.75	.00	18.73	1.00	93.00	46.2
5	ORBA	1.00	151.00	22.00	.00	16.35	1.00	97.00	45.0
2	UFV-3	1.00	126.00	17.75	.00	20.03	1.00	72.00	48.1
15	RANSOM	1.00	148.00	19.50	.00	21.98	1.00	75.00	44.1
16	CORB	1.00	167.75	13.25	.00	21.98	1.00	60.50	43.2
	GRAND MEAN	1.00	159.81	20.41	.00	20.93	1.00	80.36	
	STANDARD ERROR OF A VARIETY MEAN	.00	14.34	2.09	.00	1.02	.00	8.50	
	COEFFICIENT OF VARIATION	.00%	17.94%	20.45%	.00%	9.79%	.00%	21.14%	
	5% LSD VARIETY MEANS (*****=NS)	.00	*****	5.93	.00	2.92	.00	*****	
	C O R R E L A T I O N S		(+ - PROB=.05		(+ - PROB=.01)				
	YIELD KG/HA	.00	*.21	.46++	.00	*.13	.00	*.04	
	DAYS TO FLOWER	.00	*.17	.46++	.00	*.10	.00	*.02	
	DAYS TO MATURITY	.00	-.11	.44++	.00	*.28+	.00	-.43++	
	NODULE ABUND 1	.00	*.00	.00	.00	*.00	.00		
	NODULE ABUND 2	.00	*.00	.00	.00	*.00	.00		
	NODULE ACT. 1	.00	*.00	.00	.00	*.00	.00		
	NODULE ACT. 2	.00	*.00	.00	.00	*.00	.00		
	PLANT HEIGHT	.00	*.23	.62++	.00	-.12	.00	*.29+	
	LODGING	.00	*.21	.33++	.00	-.07	.00	*.22	
	SHATTER	1.00	*.00	.00	.00	*.00	.00		
	PLANTS HARVEST	.00	1.00	-.17	.00	*.00	.00	*.01	
	PODS PER PLANT	.00	-.17	1.00	.00	-.18	.00	*.10	
	POD HEIGHT	.00	*.00	*.00	1.00	*.00	.00	*.00	
	100 SEED WEIGHT	.00	*.00	-.18	.00	1.00	.00	-.27+	
	QUALITY OF SEED	.00	*.00	*.00	*.00	*.00	1.00	*.00	
	PERCENT GERM.	.00	*.01	.10	.00	-.27+	.00	1.00	

TABLE 125 EXPERIMENT 220 YEAR 1978

REGION - SOUTH AMERICA
 SITE - BUENOS AIRES
 LATITUDE - 34 DEG. 35 MIN. S
 COOPERATOR - CARLOS REMUSSI
 DATE PLANTED - NOVEMBER 13, 1978
 AMOUNT OF MOISTURE - 588 MM
 SUBSTITUTE VARIETIES - HALSOY 71, SRF 450

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND. 1	NODULE ABUND. 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING	CORRELATIONS		
											++	--	PROB=.05
1	WILLIAMS	1675.33	33.75	113.25	.00	.00	.00	.00	67.50	1.00			
15	EVANS	1662.83	39.75	134.25	.00	.00	.00	.00	65.00	1.00			
16	CRAWFORD	1629.49	28.75	80.00	.00	.00	.00	.00	53.75	1.00			
2	GALLAND	1583.65	31.25	108.00	.00	.00	.00	.00	75.00	1.00			
9	HARCOR	1537.81	29.75	102.25	.00	.00	.00	.00	70.00	1.00			
12	COLUMBUS	1508.63	40.50	135.00	.00	.00	.00	.00	80.00	1.00			
7	SWIFT	1471.13	29.00	81.50	.00	.00	.00	.00	61.25	1.00			
8	STEELE	1446.12	29.25	87.00	.00	.00	.00	.00	70.00	1.00			
6	ALTONA	1373.19	27.50	74.75	.00	.00	.00	.00	52.50	1.00			
11	ELF	1371.11	38.50	110.00	.00	.00	.00	.00	51.25	1.00			
4	HALSOY 71	1366.94	60.75	151.00	.00	.00	.00	.00	105.00	1.00			
10	HODGSON	1358.60	29.75	90.00	.00	.00	.00	.00	55.00	1.00			
13	UNION	1323.18	36.00	133.00	.00	.00	.00	.00	73.75	1.00			
5	MITCHELL	1080.22	40.25	145.75	.00	.00	.00	.00	75.00	1.00			
3	FRANKLIN	1031.46	36.75	127.00	.00	.00	.00	.00	78.75	1.00			
14	SRF 450	979.36	39.75	139.25	.00	.00	.00	.00	72.50	1.25			
GRAND MEAN			1399.94	35.70	113.25	.00	.00	.00	.00	70.39	1.02		
VARIETY MEAN			173.33	1.23	5.97	.00	.00	.00	.00	2.93	0.6		
COEFFICIENT OF VARIATION			24.76%	6.91%	10.55%	.00%	.00%	.00%	.00%	8.32%	12.31%		
5% LSD VARIETY MEANS (*****=NS)			*****	3.51	17.01	.00	.00	.00	.00	8.34	*****		
C O R R E L A T I O N S													
YIELD KG/HA			1.00	-.11	-.36++	.00	.00	.00	.00	.00	-.08		
DAYS TO FLOWER			1.00	-.73++	.00	.00	.00	.00	.00	.00	.72++		
DAYS TO MATURITY			-.36++	-.73++	1.00	.00	.00	.00	.00	.00	.66++		
NODULE ABUND. 1			-.00	.00	1.00	.00	.00	.00	.00	.00	.00		
NODULE ABUND. 2			.00	.00	.00	1.00	.00	.00	.00	.00	.00		
NODULE ACT. 1			.00	.00	.00	.00	1.00	.00	.00	.00	.00		
NODULE ACT. 2			.00	.00	.00	.00	.00	1.00	.00	.00	.00		
PLANT HEIGHT			-.08	-.72++	.66++	.00	.00	.00	.00	.00	-.00		
HEIGHT			-.29+	.07	.26+	.00	.00	.00	.00	.00	1.00		
LODGING			-.46++	-.06	.16	.00	.00	.00	.00	.00	-.16		
SHATTER			.01	.13	.08	.00	.00	.00	.00	.00	.24		
PLANTS HARVEST			-.33++	.35++	.51++	.00	.00	.00	.00	.00	.25+		
PODS PER PLANT			-.20	.19	.20	.00	.00	.00	.00	.00	.45++		
POD HEIGHT			-.04	.39++	.62++	.00	.00	.00	.00	.00	.57++		
100 SEED WEIGHT			-.60++	-.23	.09	.00	.00	.00	.00	.00	-.18		
QUALITY OF SEED			.12	.40++	.33++	.00	.00	.00	.00	.00	.47++		
PERCENT GERM.											-.06		

TABLE 125 EXPERIMENT 220 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
1	WILLIAMS	1,00	276.25	22.50	12.00	19.10	4.25	90.00	43.0
15	EVANS	1,00	296.25	35.50	15.00	19.70	3.50	94.00	43.6
16	CRAWFORD	1,00	299.25	23.75	6.25	12.15	3.50	88.00	40.7
2	CALLAND	1,25	306.25	23.75	13.75	18.40	4.00	90.00	43.2
9	HARCOR	1,00	285.00	27.00	5.75	14.03	4.25	90.00	41.5
12	COLUMBUS	1,00	302.50	29.50	16.25	19.10	3.50	98.00	44.2
7	SWIFT	1.75	342.50	23.00	7.50	13.00	4.50	95.75	40.8
8	STEELE	1.25	259.50	22.50	10.00	18.00	3.50	96.00	41.6
6	ALTONA	2.25	237.50	25.00	8.75	14.40	4.50	72.00	44.1
11	ELF	1.75	250.00	24.50	6.75	15.03	4.25	88.00	43.0
4	HALESOY 71	1,00	320.00	32.25	10.00	17.03	3.25	98.00	43.5
10	HODGSON	1.25	267.50	25.75	8.75	15.10	3.75	84.00	40.9
13	UNION	1.50	273.75	25.75	11.75	18.00	4.00	88.00	43.2
5	MITCHELL	2.75	253.75	31.50	7.50	17.00	4.75	94.00	44.1
3	FRANKLIN	1.75	266.25	26.25	14.25	17.08	4.50	80.00	43.9
14	SRF 450	1.75	326.25	40.25	10.75	18.30	4.50	86.00	43.1
	GRAND MEAN	1.45	285.16	27.39	10.31	16.59	4.03	89.48	
	STANDARD ERROR OF A VARIETY MEAN	.34	28.44	3.31	1.65	.03	.28	.81	
	COEFFICIENT OF VARIATION	46.25%	19.94%	24.18%	31.98%	.37%	13.81%	1.82%	
	5% LSD VARIETY MEANS (*****=NS)	.96	*****	9.43	4.70	.09	.79	2.31	
	C O R R E L A T I O N S	(+ - FROB=.05	(+ - FROB=.05	(+ - FROB=.05	(+ - FROB=.01)	(+ - FROB=.01)	(+ - FROB=.01)	(+ - FROB=.01)	(+ - FROB=.01)
	YIELD KG/HA	-*.46++	.01	-.33++	.20	-.04	-.60++	.12	
	DAYS TO FLOWER	-.06	.13	.35++	.19	.39++	-.23	.40++	
	DAYS TO MATURITY	.16	.08	.51++	.20	.62++	.09	.33++	
	NUDULE ABUND 1	.00	.00	.00	.00	.00	.00	.00	
	NUDULE ABUND 2	.00	.00	.00	.00	.00	.00	.00	
	NUDULE ACT. 1	.00	.00	.00	.00	.00	.00	.00	
	NUDULE ACT. 2	.00	.00	.00	.00	.00	.00	.00	
	FLANT HEIGHT	-.16	.24	.25+	.45++	.57++	-.18	.47++	
	LOGGING	.25+	.20	.34++	-.16	.10	.18	-.06	
	SHATTER	1.00	-.07	.14	-.33++	-.11	.51++	-.25+	
	PLANTS HARVEST	-.07	1.00	.12	.12	.00	-.08	.27+	
	PLANT PLANT	.14	.12	1.00	-.14	.26+	-.01	.10	
	FOD HEIGHT	-.33++	.12	-.14	1.00	.60++	-.27+	.07	
	100 SEED WEIGHT	-.11	.00	.26+	.60++	1.00	-.13	.29+	
	QUALITY OF SEED	.51++	-.08	-.01	-.27+	-.13	1.00	-.28+	
	PERCENT GERM.	-.25+	.27+	.10	.07	.29+	-.28+	1.00	

TABLE 126 EXPERIMENT 162 YEAR 1978

REGION - SOUTH AMERICA
 SITE - CERRO AZUL
 LATITUDE - 27 DEG. 39 MIN. S
 COOPERATOR - WILHELM REUFKE
 DATE PLANTED - NOVEMBER 23, 1978
 SOIL TYPE - SAND 10.0%, SILT 20.0%, CLAY 70.0%, PH 5.4

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
5	RANSOM	2967.83	45.50	136.75	4.50	4.00	.00	.00	65.75	1.00
6	COBB	2886.80	57.50	148.00	4.25	4.00	.00	.00	91.50	1.50
15	BRAGG	2685.40	45.75	137.25	4.00	4.00	.00	.00	82.75	2.00
2	RILLITO	2683.08	48.25	132.00	4.25	4.00	.00	.00	87.25	2.00
10	GASOY 17	50.25	143.00	4.50	4.50	.00	.00	.00	78.00	1.25
3	BOSSIER	2213.14	61.25	141.50	4.50	4.00	.00	.00	76.50	1.75
9	DAVIS	2002.47	57.75	139.25	4.00	4.00	.00	.00	77.50	1.50
16	CRAWFORD	1983.95	31.00	124.50	4.75	4.25	.00	.00	66.50	1.25
8	FORREST	1926.08	43.00	130.00	4.25	4.00	.00	.00	62.75	1.00
1	IMPROVED PELICAN	1794.12	81.00	146.00	5.00	4.75	.00	.00	113.75	2.25
14	MITCHELL	1406.59	31.00	125.75	4.50	4.25	.00	.00	76.25	1.00
13	CUTLER 71	1370.48	30.75	117.00	4.75	4.25	.00	.00	62.25	1.00
7	JAMES	1297.33	33.00	120.25	4.00	4.00	.00	.00	61.50	1.00
11	CALLAND	1176.02	24.75	124.50	4.50	4.00	.00	.00	56.50	1.00
4	WILLIAMS	1132.03	25.50	118.25	4.25	4.25	.00	.00	58.75	1.00
12	FRANKLIN	1081.10	25.00	120.50	4.25	4.25	.00	.00	74.75	1.25
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S (+ - PROB=.05 ++ - PROB=.01)										
YIELD KG/HA										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE ABUND 1										
NODULE ABUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
PLANT HEIGHT										
LODGING										
SHATTER										
PLANTS HARVEST										
PODS PER PLANT										
POD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										

TABLE 126 EXPERIMENT 162 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	FOD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
5	RANSOM	1.00	163.00	.00	20.75	20.98	1.75	79.75	40.8	22.4
6	COBB	1.00	170.75	.00	18.25	17.55	2.25	90.00	41.1	19.7
15	BRAGG	1.00	181.00	.00	23.75	19.68	2.00	83.75	41.9	20.6
2	RILLITO	1.00	177.00	.00	21.00	18.55	2.50	73.25	43.5	19.7
10	GASOY 17	1.00	173.25	.00	16.50	17.98	2.25	96.50	42.0	17.8
3	BOSSIER	1.00	159.50	.00	19.75	16.45	2.25	96.00	43.4	19.0
9	DAVIS	1.00	155.25	.00	19.75	18.28	2.25	81.75	42.2	20.3
16	CRAWFORD	1.00	175.75	.00	14.25	19.65	3.75	64.25	41.8	20.7
8	FORREST	1.00	191.75	.00	18.00	17.23	2.75	92.25	41.7	20.4
1	IMPROVED PELICAN	1.00	163.00	.00	21.75	11.93	1.25	98.00	41.8	19.2
14	MITCHELL	1.75	179.25	.00	16.50	16.75	4.75	27.50	43.5	21.6
13	CUTLER 71	1.50	153.25	.00	15.25	18.73	4.00	39.25	42.5	21.6
7	JAMES	1.50	166.25	.00	16.75	19.63	4.00	57.00	41.9	19.4
11	CALLAND	2.00	176.50	.00	14.00	17.93	4.50	27.25	43.3	20.6
4	WILLIAMS	1.75	158.25	.00	12.25	16.80	4.25	40.00	43.1	20.8
12	FRANKLIN	1.50	154.50	.00	15.75	16.58	4.75	16.25	43.8	21.9
	GRAND MEAN	1.25	168.64	.00	17.77	17.79	3.08	66.42		
	VARIETY MEAN	*1.6	11.97	.00	1.04	.68	*.25	5.63		
	COEFFICIENT OF VARIATION	24.94%	14.20%	.00%	11.69%	7.63%	16.57%	16.94%		
	5% LSD VARIETY MEANS (*****=NS)	.44	*****	.00	2.96	1.93	.73	16.03		

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STANDARD ERROR OF A VARIETY MEAN
COEFFICIENT OF VARIATION
5% LSD VARIETY MEANS (*****=NS)

CORRELATIONS (+ - PROB=.05)

YIELD	KG/HA	-.50++	.17	.00	.49++	.38++	-.66++	.61++
DAYS TO FLOWER	-.57++	-.02	.00	.62++	-.40++	-.83++	.79++	
DAYS TO MATURITY	-.58++	.01	.00	.58++	-.23	-.77++	.77++	
NODULE ABUND 1	.06	-.15	.00	.03	-.28+	.00	-.04	
NODULE ABUND 2	-.05	-.23	.00	.00	-.39++	.01	.01	
NODULE ACT. 1	.00	.00	.00	.00	.00	.00	.00	
NODULE ACT. 2	.00	.00	.00	.00	.00	.00	.00	
PLANT HEIGHT	-.41++	.07	.00	.55++	-.42++	-.57++	.46++	
LODGING	-.32+	.12	.00	.55++	-.19	-.49++	.44++	
SHATTER	1.00	-.07	.00	-.47++	-.03	.59++	-.69++	
PLANTS HARVEST	-.07	1.00	.00	-.02	.04	-.07	.12	
PODS PER PLANT	.00	.00	1.00	.00	.00	.00	.00	
100 SEED HEIGHT	-.03	.04	.00	-.04	1.00	.02	-.01	
QUALITY OF SEED	.59++	-.07	.00	-.63++	.02	1.00	-.84++	
PERCENT GERM.	-.69++	.12	.00	.48++	-.01	-.84++	1.00	

TABLE 127

EXPERIMENT 225

YEAR 1978

REGION - SOUTH AMERICA
 SITE - FERGAMINO
 LATITUDE - 34 DEG. S
 COOPERATOR - NORA MANCUSO
 DATE PLANTED - NOVEMBER 29, 1978
 SOIL PH - 5.8
 LOCAL VARIETIES - HALESOY 71 CA, HOOD

COUNTRY - ARGENTINA
 ELEVATION - 65 M
 LONGITUDE - 61 DEG. W
 DATE HARVESTED - MARCH, 1979

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING	CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)	
4	HOOD	3174.00	78.00	145.50	.00	.00	.00	.00	.00	80.00	1.00	
12	COLUMBUS	3094.65	40.75	120.00	.00	.00	.00	.00	.00	65.00	1.00	
14	HALESOY 71 CA	2876.44	76.50	146.50	.00	.00	.00	.00	.00	86.25	1.00	
5	MITCHELL	2864.53	42.00	106.25	.00	.00	.00	.00	.00	63.50	1.00	
2	CALLAND	2769.31	36.75	100.50	.00	.00	.00	.00	.00	60.25	1.00	
15	CRAWFORD	2570.94	42.25	105.00	.00	.00	.00	.00	.00	59.75	1.00	
3	FRANKLIN	2519.36	40.00	107.75	.00	.00	.00	.00	.00	55.00	1.00	
1	WILLIAMS	2301.15	38.25	102.50	.00	.00	.00	.00	.00	57.00	1.00	
13	UNION	2301.15	38.00	100.75	.00	.00	.00	.00	.00	48.75	1.00	
11	ELF	1916.30	38.75	103.25	.00	.00	.00	.00	.00	37.75	1.00	
9	HARCOR	1368.79	31.00	100.00	.00	.00	.00	.00	.00	43.00	1.00	
8	STEELE	1227.94	28.00	89.00	.00	.00	.00	.00	.00	39.75	1.00	
16	EVANS	989.89	28.75	79.75	.00	.00	.00	.00	.00	40.50	1.00	
7	SWIFT	972.04	27.75	95.00	.00	.00	.00	.00	.00	38.25	1.00	
10	HODGSON	964.10	31.75	88.75	.00	.00	.00	.00	.00	42.50	1.00	
6	ALTONA	706.21	26.25	68.75	.00	.00	.00	.00	.00	35.50	1.00	
GRAND MEAN			2038.55	40.30	103.70	.00	.00	.00	.00	53.34	1.00	
STANDARD ERROR OF A VARIETY MEAN			120.34	1.35	.61	.00	.00	.00	.00	3.02	.00	
COEFFICIENT OF VARIATION			11.81%	6.70%	1.18%	.00%	.00%	.00%	.00%	11.32%	.00%	
5% LSD VARIETY MEANS (*****NS=NS)			342.77	3.84	1.75	.00	.00	.00	.00	8.60	.00	
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)												
YIELD KG/HA	1.00	*.66++	*.66++	.77++	.00	.00	.00	.00	.00	*.79++	*.00	
DAYS TO FLOWER	.66++	1.00	.92++	.92++	.00	.00	.00	.00	.00	*.83++	*.00	
DAYS TO MATURITY	.77++	.92++	1.00	.00	.00	.00	.00	.00	.00	*.85++	*.00	
NODULE ABUND 1	.00	.00	.00	1.00	.00	.00	.00	.00	.00	.00	.00	
NODULE ABUND 2	.00	.00	.00	.00	1.00	.00	.00	.00	.00	.00	.00	
NODULE ACT. 1	.00	.00	.00	.00	.00	1.00	.00	.00	.00	.00	.00	
NODULE ACT. 2	.00	.00	.00	.00	.00	.00	1.00	.00	.00	.00	.00	
PLANT HEIGHT	.79++	.83++	.85++	.85++	.00	.00	.00	.00	.00	1.00	.00	
LODGING	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.00	.00	
SHATTER	-.45++	-.54++	-.49++	-.49++	.00	.00	.00	.00	.00	-.57++	.00	
PLANTS HARVEST	-.01	-.10	-.07	-.07	.00	.00	.00	.00	.00	.00	.00	
PODS PER PLANT	.65++	.75++	.77++	.77++	.00	.00	.00	.00	.00	.78++	.00	
POD HEIGHT	.56++	.79++	.72++	.72++	.00	.00	.00	.00	.00	.74++	.00	
100 SEED WEIGHT	.49++	.07	.17	.17	.00	.00	.00	.00	.00	.18	.00	
QUALITY OF SEED	-.79++	-.68++	-.72++	-.72++	.00	.00	.00	.00	.00	-.74++	.00	
PERCENT GERM.	.83++	.56++	.67++	.67++	.00	.00	.00	.00	.00	.63++	.00	

TABLE 127 EXPERIMENT 225 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
4	HOOD	1.00	176.25	37.25	12.80	17.18	1.75	97.75	37.4	12.5
12	COLUMBUS	1.75	241.75	29.93	7.30	17.35	2.00	93.25	39.7	19.8
14	HALESOY 71 CA	1.00	199.25	38.63	13.45	14.88	1.75	98.75	38.6	18.2
5	MITCHELL	1.75	195.50	27.10	7.53	18.85	2.75	94.00	38.6	19.9
2	CALLAND	2.00	206.00	20.15	7.25	19.45	3.25	97.25	37.0	21.1
15	CRAWFORD	1.75	136.75	29.35	8.65	17.88	2.75	97.25	39.6	20.2
3	FRANKLIN	1.50	194.00	21.50	7.43	18.23	3.50	94.00	38.0	19.8
1	WILLIAMS	1.75	173.00	25.98	5.73	19.83	2.75	94.25	40.9	21.8
13	UNION	1.25	186.25	15.40	8.28	19.58	2.50	98.50	40.2	21.0
11	ELF	2.00	174.00	18.35	5.30	19.43	3.50	95.25	40.9	19.9
9	HARCOR	3.25	172.75	22.60	3.23	15.23	4.50	70.25	41.0	19.2
8	STEELE	2.00	176.25	13.00	7.48	19.18	3.50	79.50	40.1	20.0
16	EVANS	2.75	192.75	18.50	5.73	13.65	5.00	63.25	40.3	20.4
7	SWIFT	2.50	218.75	12.55	6.60	13.23	5.00	54.25	38.9	19.9
10	HODGSON	1.75	194.25	14.43	6.45	16.60	4.25	62.50	41.6	18.3
6	ALTONA	2.00	225.75	14.70	5.30	13.63	4.00	42.00	41.6	17.0
GRAND MEAN		1.88	191.45	22.46	7.40	17.13	3.30	83.25		
STANDARD ERROR OF A VARIETY MEAN		.27	15.96	2.50	.69	.42	*.26	3.33		
COEFFICIENT OF VARIATION		28.80%	16.67%	22.25%	18.65%	4.96%	15.71%	8.00%		
5% LSD VARIETY MEANS (*****NS)		.77	45.46	7.12	1.97	1.21	.74	9.48		
CORRELATIONS (+ - PROB=.05) ++ - PROB=.01)										
YIELD	KG/HA	-.45++	-.01	.65++	.56++	.49++	-.79++	.83++		
DAYS TO FLOWER		-.54++	-.10	.75++	.79++	.07	-.68++	.56++		
DAYS TO MATURITY		-.49++	-.07	.77++	.72++	.17	-.72++	.67++		
NODULE ABUND 1		-.00	-.00	.00	.00	.00	.00	.00		
NODULE ABUND 2		-.00	-.00	.00	.00	.00	.00	.00		
NODULE ACT. 1		-.00	-.00	.00	.00	.00	.00	.00		
NODULE ACT. 2		-.00	-.00	.00	.00	.00	.00	.00		
PLANT HEIGHT		-.57++	-.00	.78++	.74++	.18	-.74++	.63++		
LODGING		-.00	-.00	.00	.00	.00	.00	.00		
SHATTER		1.00	-.01	-.39++	-.63++	-.31+	.61++	-.47++		
PLANTS HARVEST		-.01	1.00	-.09	.03	-.23	.03	-.22		
PODS PER PLANT		-.39++	-.09	1.00	.49++	.07	-.58++	.53++		
POD HEIGHT		-.63++	.03	.49++	1.00	.07	-.66++	.45++		
100 SEED WEIGHT		-.31+	-.23	.07	.07	1.00	-.42++	.68++		
QUALITY OF SEED PERCENT	GERM.	.61++	.03	-.58++	-.66++	-.42++	1.00	-.69++		
		-.47++	-.22	.53++	.45++	.68++	-.69++	1.00		

TABLE 128 EXPERIMENT 155 YEAR 1978

REGION - SOUTH AMERICA
 SITE - ABAPO IZDZOG
 LATITUDE - 18 DEG. 39 MIN. S
 COOPERATOR - JUAN BELLOTT MONTALVO
 DATE PLANTED - NOVEMBER 15, 1978
 SOIL PH 6.9
 AMOUNT OF MOISTURE - 642.5 MM
 NUMBER OF IRRIGATIONS - 1 (70 MM)
 SUBSTITUTE VARIETY - FELICAN

COUNTRY - BOLIVIA
 ELEVATION - 389 M
 LONGITUDE - 63 DEG. 1 MIN. W
 DATE HARVESTED - FEBRUARY, 1979

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODDING	CORRELATIONS (+ - PROB=.05 + - PROB=.01)																				
											RANDALL	BOSSIER	JAMES	MITCHELL	DAVIS	RANSOM	WILLIAMS	FRANKLIN	CUTLER 71	RILLITO	CRAWFORD	GASOY 17	COBB	PELICAN	FORREST	IMPROVED FELICAN					
11		5153.53	29.00	99.25	.00	.00	.00	.00	.00	.00	49.05	68.93	1.00																		
3		4792.62	45.00	123.00	.00	.00	.00	.00	.00	.00	68.93	68.93	1.00																		
7		4676.77	33.00	94.25	.00	.00	.00	.00	.00	.00	72.70	72.70	1.00																		
14		4649.26	30.50	92.75	.00	.00	.00	.00	.00	.00	70.63	70.63	1.00																		
9		4634.26	35.75	104.75	.00	.00	.00	.00	.00	.00	54.83	54.83	1.00																		
5		4526.32	34.00	103.25	.00	.00	.00	.00	.00	.00	49.05	49.05	1.00																		
4		4492.56	29.25	92.25	.00	.00	.00	.00	.00	.00	64.63	64.63	1.00																		
12		4430.89	29.00	92.25	.00	.00	.00	.00	.00	.00	65.38	65.38	1.00																		
13		4389.63	29.00	93.50	.00	.00	.00	.00	.00	.00	64.68	64.68	1.00																		
2		4284.19	34.00	103.75	.00	.00	.00	.00	.00	.00	87.10	87.10	2.00																		
16		4118.74	29.75	94.00	.00	.00	.00	.00	.00	.00	69.65	69.65	1.00																		
10		4092.48	33.50	102.25	.00	.00	.00	.00	.00	.00	38.13	38.13	1.00																		
6		3621.56	34.00	103.75	.00	.00	.00	.00	.00	.00	51.33	51.33	1.00																		
15		3208.97	54.50	133.00	.00	.00	.00	.00	.00	.00	92.55	92.55	5.00																		
8		2787.22	34.00	104.00	.00	.00	.00	.00	.00	.00	44.35	44.35	1.00																		
1		2750.55	45.75	125.50	.00	.00	.00	.00	.00	.00	132.83	132.83	4.00																		
STANDARD ERROR OF A VARIETY MEAN		GRAND MEAN	4163.10	35.00	103.86	.00	.00	.00	.00	.00	68.48	68.48	1.50																		
COEFFICIENT OF VARIATION		MEAN	300.75	.28	.35	.00	.00	.00	.00	.00	2.21	2.21	.00																		
5% LSD VARIETY MEANS (*****=NS)		VARIATION	14.45%	1.57%	.68%	.00%	.00%	.00%	.00%	.00%	6.46%	6.46%	.00%																		
5% LSD VARIETY MEANS (*****=NS)		MEANS	856.67	.78	1.00	.00	.00	.00	.00	.00	6.30	6.30	.00																		
CORRELATIONS (+ - PROB=.05 + - PROB=.01)																															
YIELD	KG/HA	1.00	-.41++	-.41++	.00	.00	.00	.00	.00	.00	.00	.00	.00																		
DAYS TO FLOWER		-4.1++	1.00	.97++	.00	.00	.00	.00	.00	.00	.00	.00	.00																		
DAYS TO MATURITY		-4.1++		.97++	1.00	.00	.00	.00	.00	.00	.00	.00	.00																		
NODULE ABUND 1				.00	.00	1.00	.00	.00	.00	.00	.00	.00	.00																		
NODULE ABUND 2				.00	.00	.00	1.00	.00	.00	.00	.00	.00	.00																		
NODULE ACT. 1				.00	.00	.00	.00	1.00	.00	.00	.00	.00	.00																		
NODULE ACT. 2				.00	.00	.00	.00	.00	1.00	.00	.00	.00	.00																		
PLANT HEIGHT				.23	.51++	.51++	.00	.00	.00	.00	.00	.00	.00																		
LOGGING				.49++	.82++	.82++	.79++	.00	.00	.00	.00	.00	.00																		
SHATTER				.11	.54++	.46++	.00	.00	.00	.00	.00	.00	.00																		
PLANTS HARVEST				.48++	-.57++	-.57++	.00	.00	.00	.00	.00	.00	.00																		
PODS PER PLANT				.44++	.93++	.91++	.00	.00	.00	.00	.00	.00	.00																		
POD HEIGHT				.21	.24	.20	.00	.00	.00	.00	.00	.00	.00																		
100 SEED WEIGHT				.50++	-.86++	-.84++	.00	.00	.00	.00	.00	.00	.00																		
QUALITY OF SEED				.54++	.52++	.56++	.00	.00	.00	.00	.00	.00	.00																		
PERCENT GERM.				.09	-.46++	-.53++	.00	.00	.00	.00	.00	.00	.00																		

TABLE 128 EXPERIMENT 155 YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
11	CALLAND	1.00	200.75	29.45	6.75	23.65	2.25	81.75	42.3	20.9
3	BOSSIER	1.00	126.75	78.13	7.50	19.88	2.00	77.00	43.1	19.7
7	JAMES	1.00	180.75	32.78	7.18	22.98	2.00	87.25	42.8	22.2
14	MITCHELL	1.00	132.50	34.23	6.25	20.08	2.00	91.25	39.1	21.8
9	DAVIS	2.00	144.50	62.03	4.83	22.58	2.00	69.75	41.7	22.3
5	RANSOM	1.00	136.25	30.83	4.18	21.18	2.00	80.50	42.9	22.6
4	WILLIAMS	1.00	196.00	27.53	5.13	23.25	2.00	87.75	42.0	21.6
12	FRANKLIN	1.00	194.50	26.18	5.60	23.43	2.00	82.50	41.7	22.3
13	CUTLER 71	1.00	200.00	31.28	7.10	23.65	2.00	95.00	40.9	21.2
2	RILLITO	1.00	95.50	63.35	5.03	20.10	2.00	78.75	41.6	21.4
16	CRAWFORD	1.00	126.50	34.95	6.03	22.03	2.00	91.50	41.8	22.3
10	GASOY 17	1.00	136.50	38.75	3.35	22.78	2.00	75.00	40.9	21.0
6	COBB	1.00	159.00	40.45	3.53	20.03	2.00	78.25	40.3	21.4
15	PELICAN	2.00	93.75	159.38	6.43	14.40	2.75	76.25	44.0	20.5
8	FORREST	1.00	112.00	32.90	3.53	21.68	3.00	80.25	41.4	22.6
1	IMPROVED PELICAN	1.00	96.25	132.35	7.28	14.30	3.00	78.00	42.3	21.7
	GRAND MEAN	1.13	145.72	53.41	5.60	21.00	2.19	81.92		
	STANDARD ERROR OF A VARIETY MEAN	.00	10.18	3.65	.30	.19	.09	2.19		
	COEFFICIENT OF VARIATION	.00%	13.98%	13.67%	10.62%	1.85%	8.35%	5.35%		
	5% LSD VARIETY MEANS (*****=NS)	.00	29.01	10.40	.85	.55	.26	6.24		

CORRELATIONS († - PROB=.05 ‡ - PROB=.01)

YIELD	KG/HA	- .11	* .48++	- .44++	.21	* .50++	- .54++	* .09
DAYS TO FLOWER	.54++	- * .57++	* .93++	.24	- * .86++	* .52++	- * .46++	
DAYS TO MATURITY	.46++	- * .57++	* .91++	.20	- * .84++	* .56++	- * .53++	
NOODLE ABUND 1	.00	.00	.00	.00	.00	.00	.00	
NOODLE ABUND 2	.00	* .00	* .00	.00	* .00	* .00	* .00	
NOODLE ACT. 1	* .00	* .00	* .00	* .00	* .00	* .00	* .00	
NOODLE ACT. 2	* .00	* .00	* .00	* .00	* .00	* .00	* .00	
PLANT HEIGHT	.09	- * .33++	* .69++	* .62++	- * .70++	* .43++	* .02	
LODGING	* .48++	- * .49++	* .93++	* .28+	- * .88++	* .61++	- * .26+	
SHATTER	1.00	- * .23	* .56++	* .01	- * .33++	* .18	- * .43++	
PLANTS HARVEST	- .23	1.00	- * .57++	* .11	* .64++	- * .39++	* .41++	
PODS PER PLANT	* .56++	- * .57++	1.00	* .30+	- * .89++	* .54++	- * .39++	
100 SEED WEIGHT	* .01	* .11	* .30+	1.00	- * .22	* .02	* .31+	
QUALITY OF SEED	- * .33++	* .64++	- * .89++	- .22	1.00	- * .58++	* .30+	
PERCENT GERM.	* .18	- * .39++	* .54++	* .02	- * .58++	1.00	- * .27+	
	- * .43++	* .41++	- * .39++	* .31+	* .30+	- * .27+	1.00	

TABLE 129 EXPERIMENT 167 YEAR 1978

REGION - SOUTH AMERICA
 SITE - SANTA CRUZ
 LATITUDE - 17 DEG. 14 MIN. S
 COOPERATORS - H. ZURITA, D. KIDMAN AND A. TEJERINA
 DATE PLANTED - NOVEMBER 22, 1978
 SOIL PH - 6.5
 AMOUNT OF MOISTURE - 1136 MM
 LOCAL VARIETIES - PELICANO, ACADIAN

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1		NODULE ABUND 2		NODULE ACT. 1		NODULE ACT. 2		PLANT HEIGHT	LOGGING
					ABUND	1	ABUND	2	ACT.	1	ACT.	2		
15	BRAGG	3285.24	26.00	117.25	.00	.00	.00	.00	.00	.00	.00	.00	45.75	1.00
3	BOSSIER	3274.40	42.00	120.00	.00	.00	.00	.00	.00	.00	.00	.00	68.75	1.00
9	DAVIS	2851.40	29.00	109.00	.00	.00	.00	.00	.00	.00	.00	.00	54.25	1.00
2	RILLITO	2818.06	29.00	104.00	.00	.00	.00	.00	.00	.00	.00	.00	76.50	1.75
16	CRAWFORD	2702.21	26.00	96.50	.00	.00	.00	.00	.00	.00	.00	.00	75.00	1.00
10	GASOY 17	2659.28	26.00	113.25	.00	.00	.00	.00	.00	.00	.00	.00	38.25	1.25
4	WILLIAMS	2652.20	26.00	96.50	.00	.00	.00	.00	.00	.00	.00	.00	68.75	1.00
6	COBB	2648.45	45.00	131.00	.00	.00	.00	.00	.00	.00	.00	.00	48.75	1.00
5	RANSOM	2618.44	29.00	120.00	.00	.00	.00	.00	.00	.00	.00	.00	42.25	1.00
8	FORREST	2493.83	29.00	109.00	.00	.00	.00	.00	.00	.00	.00	.00	46.25	1.00
12	FRANKLIN	2406.31	26.00	95.00	.00	.00	.00	.00	.00	.00	.00	.00	68.25	1.00
14	MICHELL	2395.90	31.75	96.50	.00	.00	.00	.00	.00	.00	.00	.00	71.75	1.00
13	ACADIAN	2132.51	43.25	139.00	.00	.00	.00	.00	.00	.00	.00	.00	142.75	3.25
7	JAMES	2131.68	26.00	95.00	.00	.00	.00	.00	.00	.00	.00	.00	83.75	1.00
11	PELICANO	1937.89	56.00	139.00	.00	.00	.00	.00	.00	.00	.00	.00	129.75	2.25
1	IMPROVED PELICAN	1697.01	47.00	139.00	.00	.00	.00	.00	.00	.00	.00	.00	131.25	2.25
		GRAND MEAN	2544.05	33.56	113.75	.00	.00	.00	.00	.00	.00	.00	74.50	1.36
		STANDARD ERROR OF A VARIETY MEAN	156.54	2.10	1.01	.00	.00	.00	.00	.00	.00	.00	3.03	.14
		COEFFICIENT OF VARIATION	12.31%	12.51%	1.77%	.00%	.00%	.00%	.00%	.00%	.00	.00	8.14%	20.38%
		5% LSD VARIETY MEANS (*****=NS)	445.90	5.98	2.86	.00	.00	.00	.00	.00	.00	.00	8.63	.39
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)														
YIELD	KG/HA	1.00	- .35++	- .26+	.00	.00	.00	.00	.00	.00	.00	.00	- .56++	- .41++
DAYS TO FLOWER		- .35++	1.00	.78++	.00	.00	.00	.00	.00	.00	.00	.00	.63++	.56++
DAYS TO MATURITY		- .26+	.78++	1.00	.00	.00	.00	.00	.00	.00	.00	.00	.49++	.64++
NODULE ABUND 1		.00	.00	.00	1.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ABUND 2		.00	.00	.00	.00	1.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 1		.00	.00	.00	.00	.00	1.00	.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	1.00	.00	.00	.00	.00	.00	.00
PLANT HEIGHT		-.56++	.63++	.49++	.00	.00	.00	.00	.00	.00	.00	.00	.82++	1.00
LOGGING		-.41++	.56++	.64++	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
SHATTER		.14	-.10	-.13	.00	.00	.00	.00	.00	.00	.00	.00	-.02	-.07
HARVEST		-.39++	-.29+	.00	.00	.00	.00	.00	.00	.00	.00	.00	-.39++	-.46++
PLANT		-.35++	.44++	.53++	.00	.00	.00	.00	.00	.00	.00	.00	.52++	.65++
POD HEIGHT		-.40++	.66++	.56++	.00	.00	.00	.00	.00	.00	.00	.00	.75++	.61++
100 SEED WEIGHT		.33++	-.43++	-.36++	.00	.00	.00	.00	.00	.00	.00	.00	-.55++	-.56++
QUALITY OF SEED		-.25+	.05	-.08	.00	.00	.00	.00	.00	.00	.00	.00	.01	-.09
PERCENT GERM.		.19	.39++	.55++	.00	.00	.00	.00	.00	.00	.00	.00	.20	.45++

TABLE 129 EXPERIMENT YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
15	BRAGG	1.00	186.25	28.50	6.25	19.35	1.00	87.25	41.7	21.7
3	BOSSIER	1.00	149.00	30.98	11.50	18.33	1.00	87.25	44.4	21.0
9	DAVIS	1.00	152.75	31.43	8.00	18.93	1.25	84.00	40.9	23.3
2	RILLITO	1.00	101.50	36.48	9.25	15.58	1.00	81.50	42.8	22.5
16	CRAWFORD	1.00	112.25	31.60	7.50	18.28	1.00	78.25	43.5	22.7
10	GASOY 17	1.00	122.50	38.90	6.75	17.85	1.50	83.00	39.7	22.6
4	WILLIAMS	1.00	167.00	25.80	8.00	20.18	1.25	67.00	43.6	22.9
6	COBB	1.00	148.25	30.55	9.75	18.33	1.75	78.25	41.4	22.6
5	RANSOM	1.00	152.50	25.03	5.50	22.30	1.50	70.25	42.8	23.7
8	FORREST	1.00	118.00	42.63	8.25	15.93	1.00	80.25	42.2	21.4
12	FRANKLIN	1.25	166.50	30.28	8.00	19.08	1.75	50.75	41.9	22.5
14	MICHELL	1.00	140.00	28.33	8.25	19.30	1.50	74.75	42.9	22.4
13	ACADIAN	1.00	107.75	47.73	15.25	15.10	1.00	95.00	43.9	22.3
7	JAMES	1.00	164.50	27.20	9.75	18.68	2.25	55.25	41.9	24.0
11	PELICANO	1.00	70.50	44.85	14.50	15.85	1.50	90.75	44.7	21.1
1	IMPROVED PELICAN	1.00	147.00	41.00	15.00	15.50	1.50	75.25	44.4	21.7
	GRAND MEAN	1.02	137.89	33.83	9.47	18.03	1.36	77.42		
	STANDARD ERROR OF A VARIETY MEAN	.06	8.27	1.98	1.08	.67	.25	3.36		
	COEFFICIENT OF VARIATION	12.31%	12.00%	11.68%	22.80%	7.44%	37.52%	8.67%		
	5% LSD VARIETY MEANS (*****NS)	*****NS	23.56	5.63	3.07	1.91	.73	9.56		
	CORRELATIONS (+ - PROB=.05) ++ - PROB=.01)									
	YIELD KG/HA	.14	.28+	-.35++	-.40++	.33++	-.25+	.19		
	DAYS TO FLOWER	-.10	-.39++	.44++	.66++	-.43++	.05	.39++		
	DAYS TO MATURITY	-.13	-.29+	.53++	.56++	-.36++	-.08	.55++		
	NODULE ABUND 1	.00	.00	.00	.00	.00	.00	.00		
	NODULE ABUND 2	.00	.00	.00	.00	.00	.00	.00		
	NODULE ACT. 1	.00	.00	.00	.00	.00	.00	.00		
	NODULE ACT. 2	.00	.00	.00	.00	.00	.00	.00		
	PLANT HEIGHT	-.02	-.39++	.52++	.75++	-.55++	.01	.20		
	LODGING	-.07	-.46++	.65++	.61++	-.56++	-.09	.45++		
	SHATTER	1.00	.09	.01	-.05	.17	.14	-.27+		
	PLANTS HARVEST	.09	1.00	-.67++	-.37++	.50++	.24	-.45++		
	PODS PER PLANT	.01	-.67++	1.00	.58++	-.69++	-.14	.44++		
	POD HEIGHT	-.05	-.37++	.58++	1.00	-.59++	.10	.21		
	100 SEED WEIGHT	.17	.50++	-.69++	1.00	.14	.14	.33++		
	QUALITY OF SEED	.14	.24	-.14	.10	.14	1.00	-.38++		
	PERCENT GERM.	-.27+	-.45++	.44++	.21	-.33++	-.38++	1.00		

TABLE 130 EXPERIMENT 153 YEAR 1978

REGION - SOUTH AMERICA
 SITE - YACUIBA
 LATITUDE - 21 DEG. 57 MIN. S
 COOPERATOR - ROBERTO DELGADILLO U.
 DATE PLANTED - DECEMBER 28, 1978
 SOIL TYPE - SAND 12.4%, SILT 35.2%, CLAY 52.4%, PH 6
 FERTILIZER USED (KG/HA) - N 25.0, P 20.8, K 11.0
 AMOUNT OF MOISTURE - 1341 MM
 SUBSTITUTE VARIETY - BOSSIER ADAPTADA

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
8	FORREST	4271.69	32.00	106.00	2.50	1.50	76.25	58.25	49.93	1.00
2	RILLITO	3988.30	32.00	101.00	2.00	1.50	83.50	62.75	65.00	2.00
9	DAVIS	3959.12	28.00	111.00	1.75	1.00	85.00	66.75	60.45	1.25
3	BOSSIER	3934.12	38.00	111.00	2.00	1.75	81.25	62.50	57.48	1.25
16	CRAWFORD	3863.27	24.00	94.00	2.50	1.25	75.00	60.00	50.10	1.00
6	BOSSIER ADAPTADA	3788.26	38.00	111.00	1.75	1.25	84.00	63.25	58.43	1.00
10	GASOY 17	3675.73	24.00	106.00	2.50	1.50	76.25	58.50	36.53	1.00
14	MITCHELL	3638.23	24.00	98.00	3.50	2.25	68.00	48.00	54.30	1.00
5	RANSOM	3500.20	24.00	106.00	2.00	1.00	81.25	65.00	36.28	1.00
15	BRAGG	3342.33	28.00	106.00	2.25	1.75	78.75	61.50	42.55	1.00
11	CALLAND	3192.30	24.00	98.00	2.25	1.50	78.25	61.50	59.13	1.00
4	WILLIAMS	3179.80	24.00	94.00	2.75	1.75	74.00	60.00	49.43	1.00
1	IMPROVED PELICAN	3113.12	44.00	111.00	2.50	2.25	78.00	61.75	112.30	2.75
12	FRANKLIN	3058.94	24.00	92.00	3.25	2.75	75.00	57.50	46.98	1.00
7	JAMES	2963.99	24.00	96.00	2.25	2.00	79.00	62.50	56.70	1.00
13	CUTLER 71	2754.72	24.00	88.00	2.25	1.75	77.25	56.25	53.03	1.00
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										

C O R R E L A T I O N S (+ - PROB=.05 ++ - PROB=.01)

YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
.24	.45++	-.20	-.33++	+.13	.09	-.03	.02	.14	.09	.01	.07	.17	.03	.02	.02
1.00	.70++	-.16	.02	.17	.23	.23	.22	.23	.17	.13	.65++	.67++	.65++	.65++	.65++
.70++	1.00	-.23	-.21	.47++	.47++	.70++	.72++	.70++	.70++	.04	.04	.26+	.26+	.33++	.33++
-.16	-.23	1.00	1.00	.47++	.47++	.70++	.72++	.70++	.70++	.01	.01	-.11	-.11	-.11	-.11
-.20	-.21	-.21	1.00	.47++	.47++	.70++	.72++	.70++	.70++	.01	.01	.04	.04	.04	.04
-.33++	-.21	-.21	-.21	.47++	.47++	.70++	.72++	.70++	.70++	.01	.01	.07	.07	.07	.07
-.13	-.17	-.17	-.22	-.72++	-.72++	.76++	.76++	.76++	.76++	.01	.01	.00	.00	.00	.00
.09	.14	.23	-.70++	-.38++	-.38++	.76++	.76++	.76++	.76++	.01	.01	.07	.07	.07	.07
.03	.67++	.26+	-.17	.04	.04	.10	.10	.10	.10	.01	.01	.00	.00	.00	.00
.02	.65++	.33++	-.11	.01	.01	.13	.13	.13	.13	.09	.09	.81++	.81++	.81++	.81++
-.46++	-.63++	-.76++	-.13	.12	.12	-.15	-.15	-.15	-.15	-.09	-.09	.04	.04	.04	.04
.01	-.23	-.24	-.12	.04	.04	.05	.05	.05	.05	.01	.01	.07	.07	.07	.07
.37++	.68++	.77++	-.19	.21	.21	.13	.13	.13	.13	.01	.01	.41++	.41++	.41++	.41++
.06	.77++	.53++	-.31+	.09	.09	.20	.20	.20	.20	.01	.01	.76++	.76++	.76++	.76++
-.12	-.49++	-.05	-.11	-.27+	-.27+	.03	.03	.03	.03	.10	.10	-.50++	-.50++	-.50++	-.50++
-.55++	-.40++	-.71++	-.19	.32+	.32+	-.16	-.16	-.16	-.16	.01	.01	-.23	-.23	-.23	-.23
.02	-.25+	-.25+	-.10	.03	.03	.05	.05	.05	.05	.01	.01	.05	.05	.05	.05

TABLE 130 EXPERIMENT 153 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
8	FORREST	1.00	137.50	64.00	8.53	16.30	2.00	78.75	40.0	21.1
2	RILLITO	1.00	92.50	43.00	9.53	18.00	2.00	58.75	41.2	20.6
9	DAVIS	1.00	120.50	59.58	11.40	19.40	1.00	70.75	41.2	20.7
3	BOSSIER	1.00	92.50	73.05	14.65	19.30	2.00	56.75	42.3	20.5
16	CRAWFORD	2.00	92.50	34.33	6.83	19.50	2.00	58.75	41.7	22.3
6	BOSSIER ADAPTADA	1.00	106.25	57.60	15.15	18.20	2.00	64.25	42.3	20.5
10	GASOY 17	2.00	100.75	66.58	6.20	19.80	3.00	63.25	41.0	20.8
14	MICHELL	1.00	125.00	38.30	7.00	19.00	2.00	72.50	39.1	20.7
5	RANSOM	1.00	114.25	53.00	6.53	21.30	2.00	67.00	41.8	22.9
15	BRAGG	1.00	111.75	48.33	8.90	20.70	2.00	65.50	41.6	21.3
11	CALLAND	2.00	125.00	27.43	12.03	20.10	2.00	72.50	41.8	20.5
4	WILLIAMS	2.00	125.00	28.18	7.75	20.70	3.00	72.50	42.1	23.5
1	IMPROVED PELICAN	1.00	110.00	88.18	18.28	16.70	2.00	65.00	42.4	20.9
12	FRANKLIN	2.00	137.50	29.30	6.73	17.10	4.00	78.75	40.8	23.0
7	JAMES	2.00	137.50	28.45	9.28	19.00	3.00	78.75	40.7	22.8
13	CUTLER 71	2.00	125.00	30.08	8.08	19.00	4.00	72.50	41.1	24.0
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
CORRELATIONS (+ - PROB=.05) ++ - PROB=.01)										
YIELD KG/HA										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE ABUND 1										
NODULE ABUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
PLANT HEIGHT										
LOGGING										
SHATTER										
PLANTS HARVEST										
PODS PER PLANT										
POD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED PERCENT										
GERM.										

TABLE 151 EXPERIMENT 154 YEAR 1978

REGION - SOUTH AMERICA
 SITE - CRUZ ALTA
 LATITUDE - 28 DEG. 38 MIN. S
 COOPERATOR - LUIZ PEDRO BONETTI
 DATE PLANTED - NOVEMBER 7, 1978
 SOIL TYPE - SAND 28.7%, SILT 15.3%, CLAY 56%
 FERTILIZER USED (KG/HA) - N 10.0, P 30.8, K 41.5
 AMOUNT OF MOISTURE - 813 MM

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING	
10	GASOY 17	2977.68	56.00	155.00	.00	.00	.00	.00	72.50	1.00	
5	RANSOM	2765.14	50.00	154.00	.00	.00	.00	.00	60.00	1.00	
6	COBB	2700.54	63.00	166.00	.00	.00	.00	.00	78.75	1.00	
2	RILLITO	2698.46	53.00	154.00	.00	.00	.00	.00	77.50	1.00	
15	BRAGG	2569.26	55.00	154.00	.00	.00	.00	.00	75.00	1.00	
9	DAVIS	2490.08	61.00	153.00	.00	.00	.00	.00	71.25	1.00	
3	BOSSIER	2440.07	63.00	160.00	.00	.00	.00	.00	78.75	1.00	
8	FORREST	2204.61	47.00	152.00	.00	.00	.00	.00	68.75	1.00	
1	IMPROVED PELICAN	2054.58	83.00	169.00	.00	.00	.00	.00	108.75	2.00	
16	CRAWFORD	1306.51	31.00	103.00	.00	.00	.00	.00	55.00	1.00	
4	WILLIAMS	1093.97	25.00	93.00	.00	.00	.00	.00	47.50	1.00	
14	MITCHELL	1075.21	31.00	103.00	.00	.00	.00	.00	51.25	1.00	
13	CUTLER 71	983.53	28.00	100.00	.00	.00	.00	.00	55.00	1.00	
11	CALLAND	941.85	25.00	93.00	.00	.00	.00	.00	46.25	1.00	
12	FRANKLIN	906.43	29.00	100.00	.00	.00	.00	.00	51.25	1.00	
7	JAMES	843.92	35.00	142.00	.00	.00	.00	.00	50.00	1.00	
GRAND MEAN		1878.24	45.94	134.44	.00	.00	.00	.00	65.47	1.06	
STANDARD ERROR OF A VARIETY MEAN		123.13	.00	.00	.00	.00	.00	.00	1.73	.00	
COEFFICIENT OF VARIATION		13.11%	.00%	.00%	.00%	.00%	.00%	.00%	5.27%	.00%	
5% LSD VARIETY MEANS (*****NS)		350.71	.00	.00	.00	.00	.00	.00	4.92	.00	
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)											
YIELD	KG/HA	1.00	*76++	*76++	.82++	*.91++	*.91++	*.91++	*.94++	*.66++	*.06
DAYS TO FLOWER			*.74++	1.00	*.90++	*.90++	*.90++	*.90++	*.94++	*.57++	
DAYS TO MATURITY			*.82++	*.91++	1.00	*.90++	*.90++	*.90++	*.80++	*.80++	*.31+
NODULE ABUND 1			*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	
NODULE ABUND 2			*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	
NODULE ACT. 1			*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	
NODULE ACT. 2			*.00	*.00	*.00	*.00	*.00	*.00	*.00	*.00	
PLANT HEIGHT			*.66++	*.94++	*.80++	*.80++	*.80++	*.80++	*.68++	*.68++	1.00
LOGGING			*.06	*.57++	*.31+	*.31+	*.31+	*.31+	*.68++	*.68++	
SHATTER			*.53++	*.47++	*.48++	*.48++	*.48++	*.48++	*.44++	*.44++	-1.14
HARVEST			*.29+	*.26+	*.33++	*.33++	*.33++	*.33++	*.21	*.21	.12
PODS PER PLANT			*.68++	*.81++	*.73++	*.73++	*.73++	*.73++	*.79++	*.79++	.39++
POD HEIGHT			*.41++	*.67++	*.59++	*.59++	*.59++	*.59++	*.69++	*.69++	.43++
100 SEED WEIGHT			*.25+	*.05	*.15	*.15	*.15	*.15	*.18	*.18	-40++
QUALITY OF SEED			*.86++	*.77++	*.78++	*.78++	*.78++	*.78++	*.69++	*.69++	-1.18
PERCENT GERM.			*.77++	*.67++	*.62++	*.62++	*.62++	*.62++	*.61++	*.61++	.21

TABLE 131 EXPERIMENT 154 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
10	GASOY 17	1.00	201.50	32.25	14.25	15.85	2.00	93.00
5	RANSOM	1.00	192.25	21.25	10.00	18.65	1.00	90.50
6	COBB	1.25	197.75	44.00	12.75	15.13	2.25	93.25
2	RILLITO	1.00	149.25	34.00	17.50	15.13	1.50	93.25
15	BRAGG	1.00	238.00	25.25	15.25	17.25	1.50	89.50
9	DAVIS	1.00	169.00	34.25	15.25	17.63	2.25	85.50
3	BOSSIER	1.00	158.25	38.75	19.75	14.50	1.00	94.00
8	FORREST	1.00	146.00	31.75	11.75	19.15	3.50	72.75
1	IMPROVED PELICAN	1.00	223.75	44.25	19.50	12.83	2.00	92.25
16	CRAWFORD	1.25	177.25	15.75	9.75	17.98	3.75	77.00
4	WILLIAMS	1.75	264.25	13.50	10.50	13.33	3.50	84.75
14	MITCHELL	1.25	178.50	20.75	10.25	16.88	5.00	51.00
13	CUTLER 71	1.50	220.75	20.50	11.50	13.78	4.25	55.25
11	CALLAND	1.50	236.00	12.75	12.00	14.68	5.00	72.50
12	FRANKLIN	1.50	252.25	15.25	11.00	15.48	4.75	34.75
7	JAMES	1.50	226.00	13.25	14.00	15.93	4.50	46.50
	GRAND MEAN	1.22	201.92	26.09	13.42	15.88	2.98	76.61
	STANDARD ERROR OF A VARIETY MEAN	.19	17.00	3.07	1.00	.44	.21	2.07
	COEFFICIENT OF VARIATION	31.63%	16.84%	23.53%	14.90%	5.50%	13.86%	5.41%
	5% LSD VARIETY MEANS (*****=NS)	*****	48.43	8.74	2.85	1.25	.59	5.90

CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)

YIELD	KG/HA	-.53++	-.29+	.68++	.41++	.25+	-.86++	.77++
DAYS TO FLOWER		-.47++	-.26+	.81++	.67++	-.05	-.77++	.67++
DAYS TO MATURITY		-.48++	-.33++	.73++	.59++	.15	-.78++	.62++
NUDULE ABUND 1		.00	.00	.00	.00	.00	.00	.00
NUDULE ABUND 2		.00	.00	.00	.00	.00	.00	.00
NUDULE ACT. 1		.00	.00	.00	.00	.00	.00	.00
NUDULE ACT. 2		.00	.00	.00	.00	.00	.00	.00
PLANT HEIGHT		-.44++	-.21	.79++	.69++	-.18	-.69++	.61++
LODGING		-.14	.12	.39++	.43++	-.40++	-.18	.21
SHATTER		1.00	.22	-.32++	-.27+	-.31+	.47++	-.29+
PLANTS HARVEST		.22	1.00	-.39++	-.04	-.23	.26+	-.21
PODS PER PLANT		-.32++	-.39++	1.00	.51++	-.12	-.60++	.57++
POD HEIGHT		-.27+	-.04	.51++	1.00	-.27+	-.51++	.40++
100 SEED WEIGHT		-.31+	-.23	-.12	-.27+	1.00	-.07	-.04
QUALITY OF SEED		.47++	.26+	-.60++	-.51++	-.07	1.00	-.80++
PERCENT GERM.		-.29+	-.21	.57++	.40++	-.04	-.80++	1.00

TABLE 132 EXPERIMENT 61 YEAR 1978

REGION - SOUTH AMERICA
 SITE - DOURADOS
 LATITUDE - 22 DEG. 8 MIN. S
 DATE PLANTED - NOVEMBER 9, 1978
 SOIL TYPE - SAND 51%, SILT 3%, CLAY 46%, FH 5.5
 FERTILIZER USED (KG/HA) - N 25.0, P 77.2, K 44.0
 AMOUNT OF MOISTURE - 1260 MM

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING	CORRELATIONS	
											++ - PROB=.05	++ - PROB=.01)
7	TUNIA	4323.78	54.00	156.50	.00	.00	.00	.00	.00	.00	119.40	.00
12	BOSSIER	4029.97	54.00	170.50	.00	.00	.00	.00	.00	.00	82.05	.00
16	GASOY 17	3764.50	48.50	177.00	.00	.00	.00	.00	.00	.00	40.43	.00
15	COBB	3732.00	55.00	190.00	.00	.00	.00	.00	.00	.00	65.93	.00
14	RANSOM	3121.46	42.00	189.00	.00	.00	.00	.00	.00	.00	43.28	.00
11	RILLITO	2781.81	54.00	159.00	.00	.00	.00	.00	.00	.00	107.98	.00
2	UFV-1	2005.82	69.25	192.25	.00	.00	.00	.00	.00	.00	93.38	.00
4	HARDEE LS	1708.67	71.00	192.00	.00	.00	.00	.00	.00	.00	120.20	.00
1	CH-3	1604.49	54.50	190.25	.00	.00	.00	.00	.00	.00	166.58	.00
3	SJ-2	1602.40	54.00	191.00	.00	.00	.00	.00	.00	.00	134.28	.00
9	JUPITER	1450.29	61.50	194.00	.00	.00	.00	.00	.00	.00	107.65	.00
6	IAC-2	925.18	57.00	191.75	.00	.00	.00	.00	.00	.00	187.75	.00
10	IMPROVED FELICAN	846.00	54.50	193.00	.00	.00	.00	.00	.00	.00	163.43	.00
5	ORBA	477.18	59.75	191.00	.00	.00	.00	.00	.00	.00	152.75	.00
8	CARIBE	460.51	85.00	194.00	.00	.00	.00	.00	.00	.00	165.30	.00
13	WILLIAMS	363.82	32.75	170.75	.00	.00	.00	.00	.00	.00	61.83	.00
STANDARD ERROR OF A VARIETY MEAN												
COEFFICIENT OF VARIATION												
5% LSD VARIETY MEANS (*****=NS)												
YIELD KG/HA												
DAYS TO FLOWER												
DAYS TO MATURITY												
NODULE ABUND 1												
NODULE ABUND 2												
NODULE ACT. 1												
NODULE ACT. 2												
PLANT HEIGHT												
LODGING												
SHATTER												
PLANTS HARVEST												
PODS PER PLANT												
POD HEIGHT												
100 SEED WEIGHT												
QUALITY OF SEED GERM.												
PERCENT												

TABLE 132 EXPERIMENT 61 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
7 TUNIA		.00	.00	81.20	8.33	.00	2.75	.00
12 BOSSIER		.00	.00	59.15	8.98	.00	2.00	.00
16 GASOY 17		.00	.00	43.40	9.50	.00	2.00	.00
15 COBB		.00	.00	38.70	7.95	.00	3.50	.00
14 RANSOM		.00	.00	25.00	7.00	.00	2.50	.00
11 RILLITO		.00	.00	42.83	11.80	.00	2.50	.00
2 UFV-1		.00	.00	68.05	11.90	.00	4.00	.00
4 HARDEE LS		.00	.00	62.73	12.53	.00	5.00	.00
1 CH-3		.00	.00	71.80	12.30	.00	4.00	.00
3 SJ-2		.00	.00	82.95	12.08	.00	4.00	.00
9 JUPITER		.00	.00	64.57	14.25	.00	4.50	.00
6 IAC-2		.00	.00	54.30	20.10	.00	4.50	.00
10 IMPROVED PELICAN		.00	.00	62.93	14.35	.00	4.75	.00
5 ORBA		.00	.00	54.53	15.75	.00	3.75	.00
8 CARIBE		.00	.00	83.58	21.53	.00	5.00	.00
13 WILLIAMS		.00	.00	31.00	7.70	.00	5.00	.00
GRAND MEAN		.00	.00	57.92	12.25	.00	3.73	.00
STANDARD ERROR OF A VARIETY MEAN		.00	.00	9.01	2.58	.00	.43	.00
COEFFICIENT OF VARIATION		.00%	.00%	31.11%	42.07%	.00%	22.87%	.00%
5% LSD VARIETY MEANS (*****=NS)		.00	.00	25.66	7.34	.00	1.22	.00
C O R R E L A T I O N S	(+ - PROB=.05	++ - PROB=.01)						
YIELD	KG/HA	.00	.01					
DAYS TO FLOWER	.00	.00	.42++					
DAYS TO MATURITY	.00	.00	-.03	.30+				
NODULE ABUND 1	.00	.00		.00				
NODULE ABUND 2	.00	.00		.00				
NODULE ACT. 1	.00	.00		.00				
NODULE ACT. 2	.00	.00		.00				
PLANT HEIGHT	.00	.00	.38++	.57++				
LONGING	.00	.00		.00				
SHATTER	1.00	.00		.00				
PLANTS HARVEST	.00	.00		.00				
PODS PER PLANT	.00	1.00	.15					
POD HEIGHT	.00	.00	.15	1.00				
100 SEED WEIGHT	.00	.00		.00	1.00			
QUALITY OF SEED PERCENT	.00	.00	-.01	.43++				
GERM.	.00	.00		.00		1.00		

TABLE 133 EXPERIMENT 108 YEAR 1978

REGION - SOUTH AMERICA

SITE - JAIBA

LATITUDE - 14 DEG. 5 MIN. S

COOPERATOR - MERVYN OLSON

DATE PLANTED - JULY 27, 1978

SOIL TYPE - SAND 19%, SILT 29%, CLAY 52%, PH 6.3

FERTILIZER USED (KG/HA) - N 25.0, P 25.0, K 25.0

AMOUNT OF MOISTURE - 746 MM

NUMBER OF IRRIGATIONS - 15 (586 MM)

COUNTRY - BRAZIL
ELEVATION - 520 M
LONGITUDE - 43 DEG. 5 MIN. W
DATE HARVESTED - NOVEMBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
10	GALLAND	1920.38	21.25	104.00	2.25	2.25	92.50	97.50	38.35	1.25
12	CUTLER 71	1824.11	22.25	91.50	1.25	1.50	97.50	92.50	40.58	1.00
16	CRAWFORD	1780.36	23.50	94.00	2.00	1.25	90.00	95.00	41.60	1.00
15	COLUMBUS	1775.77	22.75	104.00	1.75	2.50	91.25	92.50	39.65	1.00
13	MITCHELL	1767.02	23.00	90.00	2.25	2.00	97.50	96.25	41.40	1.00
2	RILLITO	1574.48	25.25	93.00	3.00	2.50	95.00	93.75	37.60	1.00
1	IMPROVED FELICAN	1541.14	41.00	113.75	4.00	4.00	92.50	88.75	69.00	1.25
7	FORREST	1459.04	29.50	113.75	3.50	3.50	90.00	90.00	32.13	1.00
4	WILLIAMS	1453.21	23.25	90.00	2.00	2.25	93.75	86.25	34.28	1.25
14	BRAGG	1386.94	25.75	90.00	2.50	3.00	90.00	88.75	29.95	1.00
3	BOSIER	1336.10	39.00	113.75	1.50	2.25	93.75	93.75	48.98	1.00
8	DAVIS	1305.68	32.75	113.75	2.50	2.75	95.00	86.25	37.63	1.00
9	GASOY 17	1174.40	24.50	92.00	2.50	2.50	97.50	97.50	21.35	1.00
11	FRANKLIN	1115.64	23.75	90.00	2.00	2.25	91.25	95.00	33.30	1.00
5	RANSOM	1048.96	23.00	101.50	2.50	2.50	93.75	91.25	23.95	1.00
6	COBB	975.19	28.25	104.00	2.00	2.00	90.00	97.50	40.60	1.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****NS)										

C O R R E L A T I O N S (+ - PROB=.05 ++ - PROB=.01)

YIELD KG/HA	1.00	-.18	-.09	-.02	-.12	.03	+.13	.29+	.05
DAYS TO FLOWER	-.18	1.00	.67++	.28+	.37++	-.03	-.15	.63++	.08
DAYS TO MATURITY	-.09	.67++	1.00	.26+	.31+	-.12	-.12	.41++	.06
NODULE ABUND 1	-.02	.28+	.26+	1.00	.42++	-.17	-.02	.14	.08
NODULE ABUND 2	+.12	.37++	.31+	.42++	1.00	-.01	-.41++	.18	.05
NODULE ACT. 1	+.03	-.03	-.12	-.17	-.01	1.00	-.31+	.01	.00
NODULE ACT. 2	+.13	-.15	-.12	-.02	-.41++	-.31+	1.00	-.04	-.25+
PLANT HEIGHT	+.29+	.63++	.41++	.14	.18	.01	-.04	1.00	.08
LODGING	.05	.08	.06	.08	.05	.00	-.15	.25+	1.00
SHATTER	-.15	-.05	-.20	.06	.08	-.09	.06	.01	.01
PLANTS HARVEST	-.07	-.20	-.02	-.07	-.12	.09	.13	-.09	.01
PODS PER PLANT	.39++	.52++	.22	.36++	.33++	-.02	-.09	.60++	.10
POD HEIGHT	-.03	.56++	.40++	.01	.13	.08	-.17	.65++	.11
100 SEED WEIGHT	.32++	.68++	-.40++	-.40++	-.43++	.07	.11	-.32++	-.06
QUALITY OF SEED	-.16	.46++	.68++	.15	.29++	.01	-.07	.39++	.06
GERM. PERCENT	.00	.00	.00	.00	.00	.00	.00	.00	.00

TABLE 133 EXPERIMENT 108 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
10	CALLAND	1.00	260.75	7.00	13.45	26.50	3.50	.00	44.6
12	CUTLER 71	1.00	253.25	11.40	13.80	25.50	3.25	.00	45.1
14	CRAWFORD	1.00	244.50	9.00	15.55	25.75	1.75	.00	46.4
15	COLUMBUS	1.00	247.75	8.45	13.25	24.25	2.50	.00	46.1
13	MITCHELL	1.75	245.25	9.45	15.15	25.25	2.00	.00	42.9
2	RILLITO	1.25	243.25	11.30	13.18	21.00	2.00	.00	44.6
1	IMPROVED PELICAN	1.50	250.75	20.15	18.10	18.75	4.00	.00	46.8
7	FORREST	1.50	247.00	13.00	13.55	20.25	4.25	.00	45.0
4	WILLIAMS	1.00	249.00	7.75	13.30	25.00	1.00	.00	44.6
14	BRAGG	1.00	246.75	9.75	14.90	23.25	1.25	.00	44.2
3	BOSSIER	1.00	237.50	10.40	20.00	21.25	3.50	.00	47.0
8	DAVIS	1.00	249.50	7.20	16.10	24.50	3.50	.00	46.2
9	GASOY 17	1.00	248.25	7.65	9.70	23.00	1.00	.00	44.4
11	FRANKLIN	3.75	254.25	7.65	11.90	22.50	3.00	.00	43.3
5	RANSOM	1.00	249.25	6.40	9.70	23.50	3.25	.00	44.5
6	COBB	1.00	257.25	5.30	18.20	21.75	3.25	.00	44.1
	GRAND MEAN	1.30	249.02	9.49	14.36	23.25	2.69	.00	
	STANDARD ERROR OF A VARIETY MEAN	.14	3.52	1.15	.97	.40	*.23	.00	
	COEFFICIENT OF VARIATION	21.36%	2.83%	24.22%	13.50%	3.48%	16.76%	.00%	
	5% LSD VARIETY MEANS (*****NS=NS)	.39	10.03	3.27	2.76	1.15	.64	.00	
	C O R R E L A T I O N S	(+ - PROB=.05	(+ - PROB=.01)						
	YIELD	KG/HA	-.15	-.07	.39++	-.03	.32++	-.16	.00
	DAY S TO FLOWER		-.05	-.20	.52++	.56++	-.68++	.46++	.00
	DAY S TO MATURITY		-.20	-.02	.22	.40++	-.40++	.68++	.00
	NODE ABUND 1		.06	-.07	.36++	.01	-.40++	.15	.00
	NODE ABUND 2		.08	-.12	.33++	.13	-.43++	.29+	.00
	NODEL ACT. 1		-.09	-.09	-.02	.08	.07	.01	.00
	NODEL ACT. 2		.06	-.13	-.09	-.17	.11	-.07	.00
	FLANT HEIGHT		.01	-.09	.60++	.65++	-.32++	.39++	.00
	LODGING		.01	.01	.10	.11	-.06	.06	.00
	SHATTER		1.00	.14	.04	-.11	-.18	.13	.00
	PLANTS HARVEST		.14	1.00	-.13	-.17	.14	.15	.00
	PODS PER PLANT		.04	-.13	1.00	.22	-.55++	.20	.00
	POD HEIGHT		-.11	-.17	.22	1.00	-.22	.30+	.00
	100 SEED WEIGHT		-.18	.14	-.55++	-.22	1.00	-.35++	.00
	QUALITY OF SEED		.13	.15	.20	.30+	-.35++	1.00	.00
	PERCENT GERM.		.00	.00	.00	.00	.00	.00	1.00

TABLE 134 EXPERIMENT 221
YEAR 1978

REGION - SOUTH AMERICA
 SITE - SANTIAGO
 LATITUDE - 33 DEG. 42 MIN. S
 COOPERATORS - P.C. PARODI AND ISABEL M. NEBREDA
 DATE PLANTED - NOVEMBER 2, 1978
 SOIL PH 7.8
 FERTILIZER USED (KG/HA) - N-45.0, P 45.0
 AMOUNT OF MOISTURE - 80 MM
 NUMBER OF IRRIGATIONS - 9

TABLE 134 EXPERIMENT 221 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
16	CRAWFORD	1.00	149.25	42.13	6.75	15.30	2.00	80.50
2	CALLAND	1.00	142.25	35.68	13.15	17.23	2.00	86.50
1	WILLIAMS	1.00	126.50	37.00	13.15	17.15	1.50	76.50
8	STEELE	1.00	158.50	44.98	6.33	16.93	1.25	97.50
4	CUTLER 71	1.00	136.00	40.05	20.68	15.88	2.00	93.50
14	CORSOY	1.00	155.25	42.73	8.85	15.70	1.50	77.50
9	HARCOR	1.00	143.25	46.63	8.23	14.88	1.00	90.50
10	HODGSON	1.00	147.75	36.15	7.83	16.78	1.50	98.00
7	SWIFT	1.00	180.75	40.20	8.65	15.10	1.50	91.00
13	UNION	1.00	138.00	36.00	14.70	15.95	1.50	92.00
11	ELF	1.75	147.00	24.85	10.68	16.43	2.00	92.00
6	ALTONA	1.00	141.25	30.28	6.53	16.78	1.75	86.00
5	MITCHELL	1.00	115.00	30.75	21.28	15.15	2.50	86.50
15	EVANS	1.00	128.50	39.00	19.30	13.38	1.75	89.00
3	FRANKLIN	1.00	156.00	41.58	17.13	14.60	2.25	98.00
12	COLUMBUS	1.00	125.50	34.68	21.13	10.85	2.75	85.50
GRAND MEAN		1.05	143.17	37.67	12.77	15.50	1.80	88.78
STANDARD ERROR OF A VARIETY MEAN		.06	7.81	2.54	1.66	.43	.30	1.14
COEFFICIENT OF VARIATION		11.94%	10.92%	13.51%	26.05%	5.55%	32.88%	2.56%
5% LSD VARIETY MEANS (*****=NS)		.18	22.26	7.25	4.74	1.23	.84	3.24
CORRELATIONS (++ - PROB=.05) ++ - PROB=.01)								
YIELD KG/HA	- .05	.20	.27+	-.46++	.51++	-.24	-.32+	
DAYS TO FLOWER	.03	-.43++	-.11	.74++	-.53++	.30+	-.02	
DAYS TO MATURITY	.15	-.40++	-.15	.72++	-.42++	.36++	.00	
NODULE ABUND 1	.00	.00	.00	.00	.00	.00	.00	
NODULE ABUND 2	.00	.00	.00	.00	.00	.00	.00	
NODULE ACT. 1	.00	.00	.00	.00	.00	.00	.00	
NODULE ACT. 2	.00	.00	.00	.00	.00	.00	.00	
PLANT HEIGHT	-.34++	-.36++	.18	.64++	-.31+	.17	-.07	
LOGGING	-.36++	-.05	.18	.39++	-.40++	.17	.18	
SHATTER	1.00	.06	-.44++	-.09	.12	.04	.10	
PLANTS HARVEST	.06	1.00	.23	-.45++	.14	.17	.20	
PODS PER PLANT	-.44++	.23	1.00	-.24	-.00	-.21	.07	
POD HEIGHT	-.09	-.45++	-.24	1.00	-.45++	.48++	.02	
100 SEED WEIGHT	.12	.14	-.00	-.45++	1.00	-.37++	.06	
QUALITY OF SEED	-.04	-.17	-.21	.48++	-.37++	1.00	-.05	
PERCENT GERM.	.10	.20	.07	.02	.06	-.05	1.00	

TABLE 155 EXPERIMENT 224

YEAR 1978

REGION - SOUTH AMERICA
 SITE - SANTIAGO DE CHILE
 LATITUDE - 33 DEG. 34 MIN. S
 COOPERATOR - VITAL A. VALDIVIA
 DATE PLANTED - OCTOBER 25, 1978
 FERTILIZER USED (KG/HA) - N 0, P 75.0, K 0
 AMOUNT OF MOISTURE - 89.8 MM
 SUBSTITUTE VARIETIES - AMSOY, WELLS

COUNTRY - CHILE
 ELEVATION - 625 M
 LONGITUDE - 70 DEG. 30 MIN. W
 DATE HARVESTED - FEBRUARY, 1979

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING	CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)																	
											HARCOR	WELLS	EVANS	AMSOY	MITCHELL	HODGSON	UNION	STEELE	ELF	WILLIAMS	CALLAND	SWIFT	FRANKLIN	CRAWFORD	ALTONA	COLUMBUS		
9	HARCOR	4948.91	42.25	127.25	4.73	3.00	.00	55.00	110.00	4.50																		
14	WELLS	4811.38	41.50	122.00	4.63	3.20	.00	51.25	112.50	2.50																		
16	EVANS	4615.51	36.00	105.00	4.85	2.68	.00	57.50	106.25	3.00																		
4	AMSOY	4596.75	42.25	121.50	4.78	3.20	.00	67.50	133.75	3.25																		
5	MITCHELL	4505.07	54.75	146.00	4.88	3.63	.00	43.75	136.25	4.00																		
10	HODGSON	4490.48	33.75	113.00	4.80	3.48	.00	50.00	97.50	2.25																		
13	UNION	4257.10	51.00	138.75	4.83	3.48	.00	60.00	152.50	4.25																		
8	STEELE	4163.33	35.25	113.00	4.78	3.65	.00	41.25	117.50	2.75																		
11	ELF	4155.00	50.00	127.50	4.88	3.35	.00	45.00	81.25	1.50																		
1	WILLIAMS	4082.07	49.00	127.75	4.85	3.70	.00	46.25	118.75	3.75																		
2	CALLAND	3963.29	45.75	140.25	4.95	3.20	.00	48.75	137.50	3.50																		
7	SWIFT	3375.67	39.75	105.00	4.85	3.23	.00	58.75	110.00	3.50																		
3	FRANKLIN	3265.24	55.00	143.50	4.85	3.63	.00	36.25	155.00	4.50																		
15	CRAWFORD	2810.98	61.00	150.50	4.88	3.30	.00	50.00	152.50	4.00																		
6	ALTONA	2700.54	32.25	92.75	4.95	3.75	.00	43.75	76.25	1.00																		
12	COLUMBUS	1198.16	60.00	151.25	4.75	3.63	.00	50.00	143.75	4.25																		
GRAND MEAN		3871.22	45.59	126.56	4.82	3.38	.00	50.31	121.33	3.28																		
STANDARD ERROR OF A VARIETY MEAN		235.95	1.20	2.26	.06	*.15	.00	7.43	6.53	.41																		
COEFFICIENT OF VARIATION		12.19%	5.28%	3.57%	2.69%	8.94%	.00%	29.55%	10.77%	24.81%																		
5% LSD VARIETY MEANS (*****=NS)		672.09	3.43	6.44	*****	.43	.00	*****	18.61	1.16																		
C O R R E L A T I O N S (+ - PROB=.05 ++ - PROB=.01)																												
YIELD KG/HA	1.00	-.39++	-.21	-.15	-.32+	.00	*.10																					
DAYS TO FLOWER		-.39++	.1.00	.87++	.00	.15																						
DAYS TO MATURITY		-.21	.87++	1.00	-.06	.11																						
NODULE ABUND 1		-.15	.00	-.06	1.00	.12																						
NODULE ABUND 2		-.32+	.15	.11	.12	1.00																						
NODULE ACT. 1		.00	.00	.00	.00	.00	1.00																					
NODULE ACT. 2		.10	-.04	-.14	.29+	.00	.00	1.00																				
PLANT HEIGHT		-.17	.61++	.74++	-.12	.00	.04																					
LOGGING		.01	.52++	.57++	-.34++	-.16	.00	.13																				
SHATTER		.01	.21	.22	.10	.03	.00	-.22																				
PLANTS HARVEST		-.15	.09	.06	.10	.15	.00	-.14																				
PODS PER PLANT		.23	.25	.41++	-.26+	-.14	.00	.03																				
POD HEIGHT		-.08	.21	.16	.15	.10	.00	-.04																				
100 SEED WEIGHT		.64++	-.58++	-.37++	-.07	-.12	.00	.07																				
QUALITY OF SEED		-.45++	.27+	.13	.01	.05	.00	-.02																				
PERCENT GERM.		.00	.00	.00	.00	.00	.00	.00																				

TABLE 135 EXPERIMENT 224 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GER.	PERCENT PROTEIN	PERCENT CIL.
9	HARCOR	1.00	152.50	49.50	9.25	16.60	2.50	.00	40.9	19.2
14	WELLS	1.00	262.50	35.00	12.15	17.88	2.75	.00	42.2	20.3
16	EVANS	1.00	240.00	38.50	12.55	16.15	2.00	.00	40.9	20.7
4	AMSOY	1.00	170.00	37.25	14.00	17.30	2.50	.00	39.6	19.7
5	MITCHELL	1.25	227.50	39.75	13.70	16.43	2.25	.00	39.7	19.9
10	HODGSON	1.00	222.50	35.50	13.45	18.95	2.50	.00	40.8	20.3
13	UNION	1.00	237.50	34.75	13.80	19.25	2.25	.00	42.1	19.4
8	STEELE	1.00	240.00	35.50	11.75	18.28	2.75	.00	42.1	20.3
11	ELF	1.25	240.00	31.50	12.75	16.63	3.75	.00	42.1	17.4
1	WILLIAMS	1.00	282.50	34.25	14.15	16.75	2.75	.00	41.7	19.4
2	CALLAND	1.00	242.50	30.75	13.50	18.95	2.50	.00	42.1	19.4
7	SWIFT	1.00	220.00	26.00	15.75	16.10	3.25	.00	38.9	19.6
3	FRANKLIN	1.75	270.00	36.00	13.70	13.65	3.75	.00	39.2	17.2
15	CRAWFORD	1.00	177.50	43.50	12.00	14.33	2.25	.00	43.4	17.3
6	ALTONA	1.00	232.50	21.25	9.05	18.18	2.75	.00	42.4	17.0
12	COLUMBUS	1.00	272.50	39.50	13.65	11.65	4.00	.00	43.3	17.3

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PROBE=.05
++
+ PROBE=.01

YIELD	KG/HA	.01	-.15	.23	-.08	.64++	-.45++	.00
DAYS TO FLOWER		.21	.09	.25	.21	-.58++	.27+	.00
DAYS TO MATURITY		.22	.06	.41++	.16	-.37++	.13	.00
NODULE ABUND 1		.10	-.10	-.26+	.15	-.07	.01	.00
NODULE ABUND 2		.03	.15	-.14	.10	-.12	.05	.00
NODULE ACT. 1		.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 2		.22	-.14	.03	-.04	.07	.02	.00
PLANT HEIGHT		.32++	.02	.37++	.20	-.24	-.01	.00
LOGGING		.17	.02	.41++	.05	-.23	.03	.00
SHATTER		1.00	.11	.04	-.06	-.19	.27+	.00
PLANTS HARVEST		.11	1.00	-.33++	.15	-.01	.28+	.00
SEEDS PER PLANT		.04	-.33++	1.00	-.10	-.12	-.25+	.00
HEIGHT POD		.06	.15	-.10	1.00	-.20	.10	.00
000 SEED WEIGHT		.19	-.01	-.12	-.20	1.00	-.40++	.00
QUALITY OF SEED		.27+	.28+	-.25+	.10	-.40++	1.00	.00
PERCENT GERM.		.00	.00	.00	.00	.00	1.00	.00

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TABLE 136 EXPERIMENT 16 YEAR 1978

REGION - SOUTH AMERICA
 SITE - CORDOBA
 LATITUDE - 8 DEG. 50 MIN. N.
 COOPERATORS - MIGUEL A. MUÑOZ & LUIS A. ROJAS M.
 DATE PLANTED - APRIL 25, 1978
 SOIL TYPE - FRANCO-ARENOSO, PH 7.5
 SUBSTITUTE VARIETIES - LINEA-108, LINEA-121

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LONGING	CORRELATIONS	
											(+ - PROB=.05	(++ - PROB=.01)
3	HAKUEE LS	3063.11	34.25	129.00	.00	.00	3.25	.00	.00	87.50	2.00	
13	LINEA-121	2750.55	41.00	115.00	.00	.00	3.50	.00	.00	52.75	1.25	
12	LINEA-108	2469.24	36.50	129.00	.00	.00	2.25	.00	.00	76.75	2.25	
6	TUNIA	2458.82	33.50	104.00	.00	.00	3.75	.00	.00	90.75	1.75	
2	UFU-1	2385.89	34.25	115.00	.00	.00	3.75	.00	.00	53.25	1.00	
7	JUPITER	2365.06	36.50	115.00	.00	.00	4.00	.00	.00	66.75	1.25	
4	ORBA	2195.02	31.00	107.75	.00	.00	3.75	.00	.00	103.25	4.25	
10	BOSSIER	1896.21	34.25	100.50	.00	.00	4.00	.00	.00	57.25	1.00	
5	IAC-2	1889.13	32.00	115.00	.00	.00	3.25	.00	.00	125.75	3.25	
9	RULLITO	1858.70	32.00	104.00	.00	.00	3.00	.00	.00	81.50	1.25	
8	IMPROVED FELICAN	1281.51	30.50	104.00	.00	.00	4.00	.00	.00	106.50	2.50	
11	WILLIAMS	1083.55	30.00	110.75	.00	.00	3.75	.00	.00	76.75	1.00	
1	CH-3	972.28	38.00	112.25	.00	.00	3.25	.00	.00	117.00	4.00	
14	GASOY 17	608.45	32.00	116.50	.00	.00	4.00	.00	.00	26.75	1.00	
GRAND MEAN												
STANDARD ERROR OF A VARIETY MEAN												
COEFFICIENT OF VARIATION												
5% LSD VARIETY MEANS (*****NS)												
YIELD KG/HA												
DAYS TO FLOWER												
DAYS TO MATURITY												
NODULE ABUND 1												
NODULE ABUND 2												
NODULE ACT. 1												
NODULE ACT. 2												
PLANT HEIGHT												
LONGING												
SHATTER												
PLANTS HARVEST												
PODS PER PLANT												
POD HEIGHT												
100 SEED WEIGHT												
QUALITY OF SEED												
PERCENT GERM.												

TABLE 136 EXPERIMENT 16 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	PODS PER PLANT	FOD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
3	HARDEE LS	1.00	115.75	74.28	13.25	17.25	3.25	31.50	43.5
13	LINEA-121	1.00	48.25	86.20	10.25	19.00	3.00	29.00	43.5
12	LINEA-108	1.00	72.00	109.73	10.50	11.00	3.25	24.75	25.3
6	TUNIA	1.00	114.50	53.68	10.00	18.00	2.75	27.00	46.5
2	UFV-1	1.00	131.75	38.00	8.00	16.00	3.25	26.25	44.9
7	JUPITER	1.00	97.25	61.15	12.25	19.50	2.50	39.25	46.8
4	ORBA	1.00	140.25	42.28	8.25	15.75	3.00	27.25	43.0
10	BOSSIER	1.00	143.50	41.00	17.00	17.50	3.00	27.25	46.1
5	TAC-2	1.00	55.25	95.40	18.75	16.75	3.25	25.25	42.7
9	RILLITO	1.00	105.00	37.50	10.75	17.75	3.75	23.00	47.0
8	IMPROVED PELICAN	1.00	118.00	50.73	9.50	14.00	3.50	23.00	45.5
11	WILLIAMS	1.00	163.00	19.93	9.00	18.00	3.25	29.25	46.6
1	CH-3	1.00	105.75	35.23	13.75	16.75	2.75	38.75	46.3
14	GASOY 17	1.00	134.00	15.30	8.50	18.00	3.00	24.75	47.2
	GRAND MEAN	1.00	110.30	54.31	11.41	16.80	3.11	28.32	5.48
	STANDARD ERROR OF A VARIETY MEAN	.00	10.77	6.88	1.66	.75	.37	5.48	
	COEFFICIENT OF VARIATION	.00%	19.53%	25.35%	29.13%	8.94%	24.13%	38.73%	
	5% LSD VARIETY MEANS (*****=NS)	.00	30.81	19.69	4.75	2.15	*****	*****	
	C O R R E L A T I O N S	(+ - PROB=.05	(+ - PROB=.05	(+ - PROB=.01)					
	YIELD KG/HA	.00	-.27+	.53++	.13	.04	-.00	-.02	
	DAYS TO FLOWER	.00	-.35++	.25	.09	.12	-.05	.13	
	DAYS TO MATURITY	.00	-.31+	.37+	-.01	-.23	.12	.02	
	NODEL ABUND 1	.00	.00	.00	.00	.00	.00	.00	
	NODEL ABUND 2	.00	.48+	-.43+	.01	.22	-.18	.26+	
	NODEL ACT. 1	.00	.00	.00	.00	.00	.00	.00	
	NODEL ACT. 2	.00	.00	.00	.00	.00	.00	.00	
	PLANT HEIGHT	.00	-.14	.22	.36++	-.23	.01	.08	
	LOGGING	.00	-.11	.14	.13	-.29+	-.08	.11	
	SHATTER	1.00	.00	.00	.00	.00	.00	.00	
	PLANTS HARVEST	.00	1.00	-.70++	-.16	.03	-.07	.15	
	PODS PER PLANT	.00	-.70++	1.00	.23	-.27+	-.01	-.03	
	POD HEIGHT	.00	-.16	.23	1.00	.07	.17	.21	
	100 SEED WEIGHT	.00	.03	-.27+	.07	1.00	-.05	.04	
	QUALITY OF SEED	.00	-.07	-.01	-.17	-.05	1.00	-.82++	
	PERCENT GERM.	.00	.15	-.03	.21	.04	-.82++	1.00	

TABLE 137 EXPERIMENT 17 YEAR 1978

REGION - SOUTH AMERICA
 SITE - PALMIRA
 LATITUDE - 3 DEG. 32 MIN. N
 COOPERATOR - PROGRAMA LEGUMINOSAS DE GRANDE Y OLEAGINOSAS ANUALES
 DATE PLANTED - APRIL 7, 1978
 SOIL TYPE - SAND 35.0%, SILT 38.0%, CLAY 25.0%, PH 6.8
 AMOUNT OF MOISTURE - 428 MM
 NUMBER OF IRRIGATIONS - 1 (20 MM)
 LOCAL VARIETIES - ICA-CARIBE, ICA-TUNIA

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	ODULE ABUND 1	ODULE ABUND 2	ODULE ACT. 1	ODULE ACT. 2	PLANT HEIGHT	LODGING
10	IMPROVED PELICAN	3183.97	32.00	90.00	1.25	1.00	80.50	100.00	70.00	3.00
7	ICA-TUNIA	3175.63	30.00	95.00	1.00	1.00	82.50	97.50	59.00	1.00
6	IAC-2	2992.26	31.00	95.00	1.00	1.00	84.25	100.00	80.00	5.00
2	UFU-1	2908.91	31.00	98.00	1.25	1.00	82.25	100.00	32.00	1.00
12	BOSSIER	2875.57	31.00	88.00	1.00	1.00	81.75	97.50	52.00	2.00
3	SJ-2	2788.06	34.00	96.00	1.00	1.50	97.50	82.50	73.00	4.00
16	GASOY 17	2517.17	22.00	85.00	1.25	1.00	82.75	97.50	39.00	2.00
1	CH-3	2458.82	32.00	97.00	1.00	1.00	86.50	95.00	94.00	4.00
15	COBB	2446.32	24.00	87.00	1.25	1.00	88.25	97.50	34.00	2.00
4	HARDEE LS	2317.13	44.00	101.00	1.00	1.00	96.25	100.00	68.00	3.00
13	WILLIAMS	2296.29	25.00	79.00	1.00	1.00	83.00	100.00	46.00	1.00
14	RANSOM	2296.29	23.00	85.00	1.00	1.00	80.00	100.00	28.00	2.00
9	JUPITER	2129.59	44.00	100.00	1.00	2.50	97.00	80.00	88.00	3.00
11	RILLITO	2054.58	25.00	84.00	1.00	1.00	80.00	100.00	45.00	1.00
8	ICA-CARIBE	1829.53	31.00	98.00	1.75	1.25	76.75	90.00	61.00	2.00
5	ORBA	1700.34	31.00	86.00	1.00	1.00	75.25	100.00	75.00	5.00
STANDARD ERROR OF A VARIETY MEAN		2498.16	30.63	91.50	1.11	1.14	84.66	96.09	59.00	2.56
COEFFICIENT OF VARIATION		236.62	.00	.00	.14	.15	4.16	3.20	.00	.00
5% LSD VARIETY MEANS (*****NS=NS)		18.94%	.00%	.00%	25.42%	26.79%	9.82%	6.66%	.00%	.00%
5% LSD VARIETY MEANS (*****NS=NS)		673.99	.00	.00	.40	.44	11.84	9.12	.00	.00

C O R R E L A T I O N S (+ - PROB=.05 ++ - PROB=.01)

YIELD KG/HA	1.00	-.01	.11	-.20	-.26+	.08	.38++	-.02	
DAYS TO FLOWER	-.01	1.00	.79++	-.10	.48++	.40++	-.34++	.69++	
DAYS TO MATURITY	.11	.79++	1.00	.10	.34++	.32++	-.34++	.39++	
ODULE ABUND 1	-.20	-.10	.10	1.00	.00	-.24	-.07	.29+	
ODULE ABUND 2	-.26+	.48++	.34++	.00	1.00	.27+	-.79++	-.14	
ODULE ACT. 1	.08	.40++	.32++	-.24	.27+	1.00	-.21	.13	
ODULE ACT. 2	.38++	-.34++	-.34++	-.07	-.79++	-.21	1.00	-.32++	
PLANT HEIGHT	-.02	.69++	.54++	-.14	.35++	.22	-.32++	.00	
LOGGING	-.05	.39++	.29+	-.15	.13	.14	-.15	.74++	
SHATTER	-.38++	.02	-.13	.08	-.06	-.29+	.05	.21	
PLANTS HARVEST	.21	-.23	-.47++	-.29+	-.07	.11	.19	-.08	
PODS PER PLANT	-.04	.36++	.54++	.26+	-.03	.07	-.07	.36++	
POD HEIGHT	-.06	.82++	.60++	-.23	.54++	.47++	-.47++	.19	
100 SEED WEIGHT	-.04	-.43++	-.42++	.04	.05	-.08	.11	.80++	
QUALITY OF SEED	-.24	.04	.09	.03	.34++	.21	-.26+	.56++	
PERCENT GERM.	.13	-.53++	-.16	.22	-.11	-.31+	-.02	-.41++	

TABLE 137 EXPERIMENT 17 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
10 IMPROVED PELICAN		1.00	254.50	43.00	14.25	15.20	1.00	100.00	44.7	2.2
7 ICA-TUNIA		1.00	175.75	44.25	14.00	18.90	2.00	100.00	43.0	22.8
6 IAC-2		1.00	212.00	58.00	13.75	16.30	1.00	100.00	44.5	21.9
2 UFV-1		1.00	169.25	50.00	8.25	14.50	2.00	99.00	45.5	20.3
12 BOSSIER		1.00	219.25	46.00	15.50	11.40	1.00	97.00	44.4	22.2
3 SJ-2		1.00	215.25	52.00	18.00	11.20	2.00	99.00	45.1	20.0
16 GASOY 17		1.00	246.50	26.25	7.25	19.70	2.00	100.00	43.4	20.2
1 CH-3		1.00	200.75	54.50	18.50	12.40	2.00	100.00	45.4	18.7
15 COBB		1.00	219.50	33.50	6.75	20.10	3.00	100.00	42.6	21.9
4 HARDEE LS		1.00	186.75	56.75	18.50	13.10	2.00	92.00	44.9	21.0
13 WILLIAMS		1.00	250.75	27.25	6.75	19.60	2.00	97.00	44.0	22.3
14 RANSOM		1.00	233.75	29.00	6.50	17.50	3.00	99.00	43.0	24.6
9 JUPITER		1.00	195.00	46.75	26.25	18.30	3.00	97.00	42.8	22.9
11 RILLITO		1.00	168.50	50.00	5.75	15.60	1.00	97.00	42.8	22.1
8 ICA-CARIBE		2.00	107.75	96.50	9.25	14.40	2.00	100.00	47.2	18.3
5 ORBA		4.00	216.50	47.25	16.25	14.28	2.00	100.00	42.8	19.3
GRAND MEAN		1.25	204.48	47.56	12.84	15.78	1.94	98.56		
STANDARD ERROR OF A VARIETY MEAN		.00	13.71	5.60	1.08	*.17	.00	.00		
STANDARD COEFFICIENT OF VARIATION		.00%	13.41%	23.57%	16.89%	2.14%	.00%	.00%		
5% LSD VARIETY MEANS (*****=NS)		.00	39.05	15.96	3.09	.48	.00	.00		
C O R R E L A T I O N S		(+ - PROB=.05	(+ - PROB=.05	(+ - PROB=.05	(+ - PROB=.05	(+ - PROB=.05	(+ - PROB=.05	(+ - PROB=.05	(+ - PROB=.05	(+ - PROB=.05
YIELD	KG/HA	-.38++	.21	-.04	-.06	-.04	-.24	.13		
DAYS TO FLOWER		.02	-.23	.36++	.82++	-.43++	.04	-.53++		
DAYS TO MATURITY		-.13	-.47++	.54++	.60++	-.42++	.09	-.16		
NUDULE ABUND 1		.08	-.29+	.26+	-.23	.04	.03	.22		
NUDULE ABUND 2		-.07	-.07	-.03	.54++	.05	.34++	-.11		
NUDULE ACT. 1		-.29+	.11	.07	.37++	-.08	.21	-.31+		
NUDULE ACT. 2		.05	.19	-.07	-.47++	.11	-.26+	-.02		
PLANT HEIGHT		.21	-.08	.36++	.80++	-.41++	-.18	-.02		
LODGING		.43++	.16	.19	.56++	-.41++	-.10	.16		
SHATTER		1.00	-.11	.21	.09	-.17	.03	.23		
PLANTS HARVEST		-.11	1.00	-.65++	.01	.21	-.00	.06		
PODS PER PLANT		.21	-.65++	1.00	.10	-.43++	-.20	-.00		
POD HEIGHT		.09	.01	.10	1.00	-.39++	.05	-.24		
100 SEED WEIGHT		-.17	.21	-.43++	-.39++	1.00	.43++	.21		
QUALITY OF SEED		.03	-.00	-.20	.05	-.43++	1.00	.03		
PERCENT GERM.		.23	.06	-.00	-.24	.21	.03	1.00		

TABLE 138

EXPERIMENT 21 YEAR 1978

REGION - SOUTH AMERICA
 SITE - BOLICHE
 LATITUDE - 2 DEG. 15 MIN. S
 COOPERATOR - EDUARDO MALDONADO ALCIAR
 DATE PLANTED - JUNE 6, 1978
 SOIL TYPE - SAND 10%, SILT 10%, CLAY 80%, PH 6.9
 AMOUNT OF MOISTURE - 195 MM
 NUMBER OF IRRIGATIONS - 5 (195 MM)
 LOCAL VARIETIES - ECUADOR 1, ECUADOR 2

COUNTRY - ECUADOR
 ELEVATION - 14 M
 LONGITUDE - 79. DEG. 38 MIN. W

DATE HARVESTED - SEPTEMBER, 1978
 NUMBER OF VARIETIES - 11

GRAND MEAN
 STANDARD ERROR OF A VARIETY MEAN
 COEFFICIENT OF VARIATION
 5% LSD VARIETY MEANS (*****=NS)

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
16	ECUADOR 2	3539.46	37.00	104.00	4.00	3.75	18.25	17.00	67.20	1.50
7	TUNIA	3479.86	31.00	104.00	4.00	2.75	17.50	18.25	58.35	1.25
4	HARDEE LS	3256.07	45.00	113.00	4.00	3.25	15.00	19.25	64.80	1.75
15	ECUADOR 1	3209.81	41.00	104.00	4.00	3.50	15.75	19.25	62.80	1.25
10	IMPROVED PELICAN	2834.73	34.00	94.00	4.00	4.00	17.25	17.50	67.95	1.50
1	CH-3	2755.13	34.00	104.00	4.00	3.75	16.25	16.25	74.40	1.00
2	UFU-1	2710.96	37.00	104.00	4.00	3.75	15.75	17.25	33.60	1.00
14	WILLIAMS	2678.04	27.00	86.00	4.00	3.50	15.75	19.25	48.00	1.00
8	CARIBE	2678.04	31.00	104.00	4.00	3.25	17.00	18.75	61.85	2.50
13	ROSSIER	2650.95	35.00	94.00	4.00	3.50	14.50	18.00	51.10	1.75
9	JUPITER	2647.61	48.00	112.00	4.00	3.75	15.75	16.25	76.25	1.75
3	SJ-2	2645.95	37.00	104.00	4.00	4.00	17.50	16.00	70.05	3.00
6	IAC-2	2607.60	34.00	104.00	4.00	3.50	17.50	19.50	65.25	1.50
12	RILLITO	2356.30	29.00	86.00	4.00	3.00	17.75	18.25	46.25	1.50
5	ORBA	2250.45	34.00	90.00	4.00	3.50	18.25	17.00	64.30	3.50
11	KAHALA	2190.02	27.00	94.00	4.00	4.00	16.50	19.00	26.55	1.00
STANDARD ERROR OF A VARIETY MEAN										
196.63										
14.14%										
560.09										

5% LSD VARIETY MEANS (*****=NS)										
56.79										
1.67										
.42										
50.30%										
7.96										
1.20										

CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)

YIELD KG/HA	1.00	*.25	*.36++	.00	.01	*.02	*.27+	*.38++	-.05
DAYS TO FLOWER	.25	1.00	*.75++	.00	.09	-.18	*.20	*.49++	*.11
DAYS TO MATURITY	.36++	*.75++	1.00	*.00	.02	-.11	-.13	*.44++	*.00
NODULE ABUND 1	.00	*.00	*.00	1.00	*.00	*.00	*.00	*.00	*.00
NODULE ABUND 2	*.01	*.09	*.02	*.00	1.00	*.09	*.02	*.19	*.08
NODULE ACT. 1	*.02	*.18	-.11	*.00	-.09	1.00	*.04	*.05	*.11
NODULE ACT. 2	*.27+	-.20	-.13	*.00	-.02	-.04	1.00	-.18	-.05
PLANT HEIGHT	*.38++	*.49++	*.44++	*.00	*.19	*.05	-.18	1.00	*.40++
LOGGING	-.05	*.11	*.01	*.00	*.08	*.11	-.05	*.40++	1.00
SHATTER	-.07	-.08	*.01	*.00	-.06	*.16	-.00	*.17	*.44++
PLANTS HARVEST	*.20	-.21	-.14	*.00	*.09	*.03	-.06	*.09	-.02
PODS PER PLANT	*.36++	*.41++	*.43++	*.00	*.24	*.08	*.06	*.49++	*.38++
POD HEIGHT	.16	*.29+	*.30+	*.00	*.02	*.06	*.26+	*.45++	*.12
100 SEED WEIGHT	*.27+	*.06	*.07	*.00	-.01	-.19	*.26+	*.29+	*.30+
QUALITY OF SEED	-.38++	-.13	-.23	*.00	-.13	*.01	*.10	*.05	*.13
PERCENT GERM.	.09	*.20	-.11	*.00	*.13	-.01	-.12	-.03	-.17

TABLE 138 EXPERIMENT 21 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
16	ECUADOR 2	1.00	212,75	36.15	20.45	20.00	1.50	100.00	42.2	19.7
7	TUNIA	1.00	199,75	24.35	17.45	23.23	1.50	99.50	43.3	20.5
4	HARDEE LS	1.00	195,50	32.75	11.40	18.75	1.75	100.00	42.9	20.3
15	ECUADOR 1	1.25	171,50	34.80	11.60	22.78	2.25	100.00	43.1	18.3
10	IMPROVED PELICAN	1.00	211,75	33.73	15.40	15.83	1.25	99.75	40.8	19.9
1	CH-3	1.25	190,50	27.20	12.70	15.78	2.50	100.00	41.0	21.7
2	UFV-1	1.00	168,25	26.88	10.10	20.40	1.25	100.00	42.4	19.8
14	WILLIAMS	1.00	201,00	18.83	9.40	22.83	2.00	100.00	42.2	16.4
8	CARIBE	2.00	197,00	32.20	11.23	15.40	2.00	99.00	43.6	18.1
13	BOSSIER	1.00	196,50	26.65	16.60	20.73	2.00	99.00	42.9	20.0
9	JUPITER	1.00	184,25	28.05	16.10	22.50	1.75	100.00	43.9	16.3
3	SJ-2	1.50	200,00	34.53	16.88	16.28	1.25	100.00	43.6	20.2
6	IAC-2	1.00	185,75	32.40	15.23	18.98	2.00	98.75	43.2	19.2
12	RILLITO	1.00	170,50	24.23	6.65	18.05	2.00	100.00	40.0	16.4
5	ORBA	1.75	210,00	26.25	15.15	15.08	2.75	99.75	39.7	19.1
11	KAHALA	1.00	217,00	22.25	9.00	22.78	2.00	99.50		
	GRAND MEAN	1.17	194,50	28.83	13.46	19.33	1.86	98.66		
	STANDARD ERROR OF A VARIETY MEAN	.13	9,02	2.31	1.35	.49	.21	.67		
	COEFFICIENT OF VARIATION	21.39%	9,27%	16.01%	20.07%	5.08%	22.43%	1.36%		
	5% LSD VARIETY MEANS (*****NS=NS)	.36	25,69	6.57	3.85	1.40	.59	1.90		
	C O R R E L A T I O N S	(+ - PROB=.05	(+ - PROB=.01)							
	YIELD KG/Ha	-.07	.20	.36++	.16	.27+	-.38++	.09		
	DAYS TO FLOWER	-.08	-.21	.41++	.29+	.06	-.13	.20		
	DAYS TO MATURITY	.01	-.14	.43++	.30+	.07	-.23	-.11		
	NODULE ABUND 1	.00	.00	.00	.00	.00	.00	.00		
	NODULE ABUND 2	-.06	.09	.24	.02	-.01	-.13	.13		
	NODULE ACT. 1	.16	.03	.08	.06	-.19	.01	-.01		
	NODULE ACT. 2	-.00	-.06	.06	-.26+	.26+	.10	-.12		
	PLANT HEIGHT	.17	.09	.49++	.45++	-.29+	-.05	-.03		
	LODGING	.44++	-.02	.38++	.12	.30+	.13	-.17		
	SHATTER	1.00	.00	.26+	-.01	-.45++	.26+	-.54++		
	PLANTS HARVEST	.00	1.00	-.15	.25+	-.08	-.14	.00		
	PODS PER PLANT	.26+	-.15	1.00	.14	-.22	-.17	-.10		
	HEIGHT POD	-.01	.25+	.14	1.00	-.08	-.12	.11		
	100 SEED WEIGHT	-.45++	-.08	-.22	-.08	1.00	-.14	.31+		
	QUALITY OF SEED	.26+	-.14	-.17	-.12	-.14	1.00	-.06		
	PERCENT GERM.	-.54++	.00	-.10	.11	.31+	-.06	1.00		

TABLE 139 EXPERIMENT 39 YEAR 1978

REGION - SOUTH AMERICA
 SITE - PALLATANGA
 LATITUDE - 1 DEG. 59 MIN. S
 COOPERATOR - INIAF
 DATE PLANTED - AUGUST 24, 1978
 SOIL TYPE - SAND 31%, SILT 45%, CLAY 24%, PH 6.7
 LOCAL VARIETIES - ECUADOR 1, ECUADOR 2

COUNTRY - ECUADOR
 ELEVATION - 1270 M
 LONGITUDE - 78. DEG. 58 MIN. W
 DATE HARVESTED - DECEMBER, 1978
 SOIL TYPE - SAND 31%, SILT 45%, CLAY 24%, PH 6.7

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/Ha	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
9	JUPITER	2944.34	135.00	206.00	4.50	4.00	100.00	88.75	75.55	2.00
4	HARDEE LS	2796.39	135.00	206.00	4.50	3.75	70.00	92.50	65.75	2.25
12	RILLITO	2488.00	102.00	171.00	4.25	3.50	75.00	97.50	39.30	1.00
14	WILLIAMS	2227.53	102.00	169.00	4.50	3.75	75.00	95.00	28.85	2.00
11	KAHALA	2175.43	102.50	165.00	4.25	3.50	93.75	92.50	36.00	1.00
10	IMPROVED PELICAN	2146.26	122.00	201.00	4.50	4.00	80.00	98.75	67.60	1.50
2	UFU-1	2112.92	114.50	189.00	4.50	4.00	92.50	92.50	40.25	1.50
7	TUNIA	2002.48	102.50	194.25	4.00	4.00	77.50	96.25	45.75	1.50
16	ECUADOR 2	1942.05	118.25	193.50	4.25	3.75	71.25	97.50	47.90	1.25
13	BOSSIER	1935.80	109.75	169.00	4.25	3.75	92.50	97.50	37.80	1.25
3	SJ-2	1879.54	117.00	193.50	4.50	4.00	75.00	91.25	65.70	1.75
8	CARIBE	1846.20	102.00	176.25	4.25	3.75	83.75	100.00	46.70	1.25
15	ECUADOR 1	1844.12	122.00	196.50	4.50	3.75	100.00	96.25	37.20	1.00
5	ORBA	1839.95	134.50	193.50	4.25	3.75	86.25	95.00	66.95	1.25
1	CH-3	1625.32	111.25	201.00	4.00	3.75	77.50	98.75	75.15	1.75
6	IAC-2	1012.70	110.50	203.50	4.50	3.50	85.00	100.00	52.65	1.75
STANDARD ERROR OF A VARIETY MEAN		2051.19	115.05	189.25	4.34	3.78	83.44	95.63	51.82	1.50
COEFFICIENT OF VARIATION		227.08	3.63	4.11	.22	.22	6.11	2.54	5.31	.24
5% LSD VARIETY MEANS (*****=NS)		22.14%	6.31%	4.34%	10.19%	11.45%	14.64%	5.31%	20.51%	31.43%
646.82		10.34	11.70	*****	*****	*****	17.40	*****	15.14	.67
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)										
YIELD KG/Ha	1.00	.29+	.06	-.28+	-.15	.11	-.27+	.21	.31+	
DAYS TO FLOWER	.29+	1.00	.59++	.10	-.01	.18	-.25+	.64++	.18	
DAYS TO MATURITY	.06	.59++	1.00	.06	.13	-.00	-.02	.67++	.38++	
NODULE ABUND 1	-.28+	.10	.06	1.00	.35++	.06	-.08	-.11	-.12	
NODULE ABUND 2	-.15	-.01	.13	.35++	1.00	-.08	-.10	-.02	-.06	
NODULE ACT. 1	.11	.18	-.00	.06	.08	1.00	-.07	.01	-.17	
NODULE ACT. 2	-.27+	-.25+	-.02	-.08	-.10	-.07	1.00	-.15	-.27+	
PLANT HEIGHT	.21	.64++	.67++	-.11	-.02	.01	-.15	1.00	.35++	
LOGGING	.31+	.18	.38++	-.12	-.06	-.17	-.27+	.35++	1.00	
SHATTER	.00	.00	.00	.00	.00	.00	.00	.00	.00	
PLANTS HARVEST	.20	-.29+	-.47++	-.22	-.19	-.01	.07	-.11	-.01	
PODS PER PLANT	.54++	.32+	.19	-.05	.06	-.16	-.31+	.34++	.38++	
HEIGHT	.29+	.59++	.54++	.11	.13	.19	-.26+	.67++	.25+	
WEIGHT	.21	.25	.40++	.02	-.05	.20	-.19	.03	.16	
QUALITY OF SEED	-.11	.09	.28+	-.06	-.01	-.01	-.09	.40++	.12	
PERCENT GERM.	.00	.00	.00	.00	.00	.00	.00	.00	.00	

TABLE 139 EXPERIMENT 39 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
9	JUPITER	1.00	140.25	35.50	21.85	23.20	2.75	.00
4	HARDEE LS	1.00	118.00	40.25	11.35	18.98	2.25	.00
12	RILLITO	1.00	172.75	25.00	4.00	18.15	2.50	.00
14	WILLIAMS	1.00	198.25	24.50	3.05	18.68	2.00	.00
11	KAHALA	1.00	198.25	24.25	8.70	18.85	3.00	.00
10	IMPROVED PELICAN	1.00	185.75	30.25	10.80	16.10	2.50	.00
2	UFV-1	1.00	155.25	24.00	8.10	19.43	2.25	.00
7	TUNIA	1.00	139.00	24.50	7.05	20.93	2.25	.00
16	ECUADOR 2	1.00	123.00	32.50	8.00	19.63	2.75	.00
13	BOSSIER	1.00	177.50	20.00	5.90	14.10	2.00	.00
3	SJ-2	1.00	136.50	28.50	10.85	15.25	2.50	.00
8	CARIBE	1.00	172.25	23.75	5.60	12.23	2.50	.00
15	ECUADOR 1	1.00	77.25	21.50	7.50	24.85	2.50	.00
5	ORBA	1.00	148.75	22.50	11.15	17.55	3.00	.00
1	CH-3	1.00	151.75	28.00	10.20	15.30	3.00	.00
6	IAC-2	1.00	151.75	15.75	8.35	22.98	3.25	.00
STANDARD ERROR OF A VARIETY MEAN		1.00	152.89	26.28	8.90	18.51	2.56	.00
COEFFICIENT OF VARIATION		.00	14.68	4.22	1.28	1.19	.35	.00
5% LSD VARIETY MEANS (*****=NS)		.00	19.20%	32.11%	28.84%	12.89%	27.21%	.00%
		.00	41.81	12.02	3.66	3.40	*****	.00
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)								
YIELD	KG/HA	.00	.20	.54++	.29+	.21	-.11	.00
DAYS TO FLOWER	.00	-.29+	.32+	.59++	.25	.09	.00	.00
DAYS TO MATURITY	.00	-.47++	.19	.54++	.40++	.28+	.00	.00
NODULE ABUND 1	.00	-.22	-.05	.11	.02	-.06	-.01	.00
NODULE ABUND 2	.00	-.19	.06	.13	-.05	-.01	.00	.00
NODULE ACT. 1	.00	-.01	-.16	.19	.20	-.01	.00	.00
NODULE ACT. 2	.00	-.07	-.31+	-.26+	-.19	-.09	.00	.00
PLANT HEIGHT	.00	-.11	.34++	.67++	.03	.40++	.00	.00
LODGING	.00	-.01	.38++	.25+	.16	.12	.00	.00
SHATTER	1.00	.00	.00	.00	.00	.00	.00	.00
PLANTS HARVEST	.00	1.00	-.15	-.12	-.30+	-.09	.00	.00
PODS PER PLANT	.00	-.15	1.00	.26+	.08	.07	.00	.00
100 SEED WEIGHT	.00	-.12	.26+	1.00	.18	.18	.00	.00
QUALITY OF SEED	.00	-.30+	.08	.18	1.00	.28+	1.00	.00
PERCENT GERM.	.00	-.09	.07	.18	.28+	.00	.00	.00
		.00	.00	.00	.00	.00	1.00	.00

TABLE 140

EXPERIMENT 38

YEAR 1978

REGION - SOUTH AMERICA
 SITE - E.E. PORTOVIEJO
 LATITUDE - 1 DEG. 4 MIN. S
 COOPERATOR - INIAP
 DATE PLANTED - AUGUST 1, 1978
 SOIL TYPE - SAND 20%, SILT 30%, CLAY 50%, PH 7.5
 AMOUNT OF MOISTURE - 400 MM
 NUMBER OF IRRIGATIONS - 7 (50 MM)
 LOCAL VARIETIES - ECUADOR 1, ECUADOR 2

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING	
10	IMPROVED FELICAN	2072.75	36.00	107.00	4.00	4.00	.00	.00	56.25	1.50	
7	TUNIA	2024.50	32.00	107.00	4.00	4.50	.00	.00	48.50	1.00	
6	IAC-2	1887.25	35.00	107.00	4.00	4.25	.00	.00	52.25	1.25	
3	SJ-2	1779.50	36.00	111.50	4.25	4.50	.00	.00	55.75	2.50	
2	UFV-1	1746.25	36.00	107.00	4.00	3.50	.00	.00	32.25	1.00	
12	RILLITO	1704.75	30.00	107.00	3.75	4.25	.00	.00	38.50	1.25	
13	BOSSIER	1645.75	35.00	107.00	3.75	4.25	.00	.00	38.75	1.50	
5	ORBA	1637.00	35.00	107.00	4.00	4.25	.00	.00	44.50	1.50	
16	ECUADOR 2	1587.00	38.00	107.00	4.00	4.00	.00	.00	41.25	1.25	
1	CH-3	1560.75	35.00	111.50	4.00	3.75	.00	.00	65.50	1.00	
14	WILLIAMS	1525.75	30.00	107.00	3.75	4.25	.00	.00	33.25	1.00	
9	JUPITER	1491.25	46.50	116.00	4.25	4.50	.00	.00	63.25	3.00	
8	CARIBE	1366.50	34.00	118.25	3.75	4.00	.00	.00	48.75	2.00	
11	KAHALA	1336.75	34.00	96.00	3.75	4.25	.00	.00	38.25	2.00	
15	ECUADOR 1	1316.00	41.00	107.00	3.75	4.00	.00	.00	37.00	1.00	
4	HARDEE LS	1312.25	37.50	116.00	4.00	3.75	.00	.00	56.75	1.00	
<hr/>											
GRAND MEAN											
STANDARD ERROR OF A VARIETY MEAN											
COEFFICIENT OF VARIATION											
5% LSD VARIETY MEANS (*****=NS)											
<hr/>											
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)											
<hr/>											
YIELD	KG/HA	1.00	-.15	-.07	.07	-.02	.00	.00	.00	.31+	.13
DAYS TO FLOWER		1.00	.26+	.18	-.19	.00	.00	.00	.30+	.25+	
DAYS TO MATURITY		-.07	.26+	1.00	.20	.01	.00	.00	.52++	.21	
NODULE ABUND 1		-.07	.18	.20	1.00	.21	.00	.00	.22	.10	
NODULE ABUND 2		-.02	-.19	.01	.21	1.00	.00	.00	-.05	.18	
NODULE ACT. 1		.00	.00	.00	.00	.00	1.00	.00	.00	.00	
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	1.00	.00	.00	
PLANT HEIGHT		.31+	.30+	.52++	.22	-.05	.00	.00	1.00	.39++	
LOGGING		.13	.25+	.21	.10	.18	.00	.00	.00	.00	
SHATTER		.00	.00	.00	.00	.00	.00	.00	.00	.00	
PLANTS HARVEST		-.33++	-.33++	.06	.06	.12	.00	.00	.27+	.20	
PODS PER PLANT		.23	.14	.31+	.08	-.10	.00	.00	.38++	.05	
POD HEIGHT		-.09	.32++	.40++	.02	-.17	.00	.00	.56++	.11	
100 SEED WEIGHT		.17	.05	-.25+	-.00	.17	.00	.00	-.21	.11	
QUALITY OF SEED		-.09	-.27+	-.12	-.14	.10	.00	.00	-.04	.12	
PERCENT GERM.		.20	-.33++	.10	.03	-.17	.00	.00	.01	-.19	

TABLE 140 EXPERIMENT 38 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
10 IMPROVED PELICAN	.00	197.50	44.25	10.75	15.40	1.50	93.00	44.0	22.0
7 TUNIA	.00	199.50	30.50	11.25	18.68	3.00	53.00	41.5	21.9
6 IAC-2	.00	200.00	38.00	11.00	17.20	3.25	82.00	40.2	23.9
3 SJ-2	.00	199.00	41.50	10.75	14.55	2.75	85.00	41.5	21.8
2 UFV-1	.00	200.00	25.00	9.50	14.93	1.75	100.00	43.7	21.4
12 RILLITO	.00	200.00	40.50	7.50	14.98	2.75	83.00	43.1	22.1
13 BOSSIER	.00	200.00	29.00	9.75	14.75	2.25	92.00	43.9	22.0
5 ORBA	.00	200.00	33.75	9.25	13.23	3.00	98.00	41.4	20.3
16 ECUADOR 2	.00	131.00	44.00	8.50	17.75	2.50	75.00	44.1	22.6
1 CH-3	.00	196.50	32.25	13.00	13.90	3.00	93.00	40.9	22.8
14 WILLIAMS	.00	199.00	22.25	7.25	17.40	2.75	85.00	42.3	23.6
9 JUPITER	.00	200.00	35.75	14.00	17.35	2.25	48.00	41.7	22.4
8 CARIBE	.00	200.00	38.00	9.50	15.40	3.50	77.00	44.9	19.1
11 KAHALA	.00	200.00	26.00	7.50	17.10	3.50	55.00	43.4	21.0
15 ECUADOR 1	.00	92.25	41.00	9.00	19.05	2.50	38.00	42.4	23.9
4 HARDEE LS	.00	184.25	40.50	14.50	12.15	1.75	87.00	40.8	
GRAND MEAN	.00	187.44	35.14	10.19	15.86	2.63	77.75		
STANDARD ERROR OF A VARIETY MEAN	.00	8.45	2.87	1.26	.55	*.23	*.00		
COEFFICIENT OF VARIATION	.00%	9.01%	16.36%	24.65%	7.00%	17.3%	*.00%		
5% LSD VARIETY MEANS (*****=NS)	.00	24.07	8.19	3.58	1.58	.66	.00		
C O R R E L A T I O N S									
		(+ - PROB=.05					(+ - PROB=.01)		
YIELD	KG/HA	.00	*.33++	.23	-.09	.17	-.09		
DAYS TO FLOWER			-.33++	.14	*.32++	*.05	-.27+		
DAYS TO MATURITY			.06	*.31+	*.40++	-.25+	-.12	*.10	
NODULE ABUND 1			.06	.08	.02	-.00	-.14	*.03	
NODULE ABUND 2			.12	-.10	-.17	.17	*.10	-.17	
NODULE ACT. 1			.00	.00	.00	.00	*.00	*.00	
NODULE ACT. 2			.00	.00	.00	.00	*.00	*.00	
PLANT HEIGHT			*.27+	*.38++	*.56++	-.21	-.04	*.01	
LODGING			.20	.05	.11	.11	*.12	-.19	
SHATTER		1.00	.00	.00	.00	.00	*.00	*.00	
PLANTS HARVEST			1.00	-.34++	.17	-.37++	*.08	*.44++	
PODS PER PLANT			-.34++	1.00	-.02	-.03	-.13	-.06	
POD HEIGHT			.17	-.02	1.00	-.33++	-.18	-.00	
100 SEED WEIGHT			-.37++	-.03	-.33++	1.00	*.30+	-.68++	
QUALITY OF SEED			.08	-.13	-.18	*.30+	1.00	-.21	
PERCENT GERM.			.00	-.06	-.00	-.68++	-.21	1.00	

TABLE 141 EXPERIMENT 9 YEAR 1978

REGION - SOUTH AMERICA
 SITE - PICHILINGUE
 LATITUDE - 1 DEG. 6 MIN. S
 COOPERATOR - EDUARDO MALDONADO
 DATE PLANTED - JUNE 14, 1978
 AMOUNT OF MOISTURE - 26 MM
 LOCAL VARIETIES - ECUADOR 1, ECUADOR 2

COUNTRY - ECUADOR
 ELEVATION - 73 M
 LONGITUDE - 79 DEG. 29 MIN. W
 DATE HARVESTED - SEPTEMBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
2	UFV-1	2993.52	35.50	101.25	4.00	4.00	20.00	37.50	52.00	1.00
15	ECUADOR 1	2908.08	41.00	104.00	4.00	3.75	33.75	61.25	80.00	2.50
10	IMPROVED PELICAN	2891.41	35.75	97.75	3.75	3.75	21.25	27.50	96.50	3.00
13	BOSSIER	2829.73	35.50	100.00	4.00	3.50	38.75	73.75	70.25	1.75
14	WILLIAMS	2811.81	28.00	90.00	4.00	4.00	16.25	40.00	65.25	1.50
9	JUPITER	2750.13	47.00	111.00	4.00	3.50	20.00	66.25	93.50	3.75
1	CH-3	2681.79	34.00	111.00	4.00	4.00	20.00	40.00	127.75	3.75
11	KAHALA	2645.53	31.75	95.25	3.75	3.25	36.25	53.75	72.25	3.75
12	RILLITO	2613.02	32.50	90.00	4.00	3.50	20.00	33.75	76.50	2.00
3	SJ-2	2496.75	36.25	100.00	4.25	4.25	8.75	22.50	100.00	4.00
4	HARDEE LS	2468.41	48.25	119.00	4.00	3.50	15.00	62.50	90.75	4.25
7	TUNIA	2387.98	32.25	97.75	4.00	4.00	31.25	52.50	83.00	3.75
8	CARIBE	2230.86	35.50	104.00	4.00	3.75	31.25	60.00	113.25	4.00
6	TAC-2	2180.44	33.25	99.25	4.00	3.75	22.50	35.00	95.00	3.25
5	ORBA	2078.75	33.50	90.00	3.75	3.25	41.25	50.00	89.50	4.50
16	ECUADOR 2	2006.23	36.00	102.75	4.00	3.25	22.50	65.00	58.25	1.00
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S (+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00	.08	.06	-.03	.18	-.05	-.12	-.08	-.26+
DAYS TO FLOWER		.08	1.00	.78++	.07	-.11	-.13	.27+	.15	.23
DAYS TO MATURITY		.06	.78++	1.00	.11	.02	-.21	.25+	.29+	.21
NODULE ABUND 1		-.03	.07	.11	1.00	.04	-.29+	.01	-.01	-.19
NODULE ABUND 2		-.03	.07	.02	.04	1.00	-.24	-.62++	.07	-.11
NODULE ACT. 1		-.05	-.13	-.21	-.29+	-.24	1.00	.43++	-.10	.06
NODULE ACT. 2		-.12	.27+	.25+	.01	-.62++	.43++	1.00	-.13	.03
PLANT HEIGHT		-.08	.15	.29+	-.01	.07	-.10	-.13	1.00	.60++
LODGING		-.26+	.23	.21	-.19	-.11	.06	.03	.60++	1.00
SHATTER		-.23	-.22	-.35++	-.44++	-.16	.30+	-.06	-.02	.32++
PLANTS HARVEST		-.33++	-.16	-.14	-.08	.22	.07	-.11	.17	.21
PODS PER PLANT		-.21	.48++	.46++	.10	.03	-.20	-.03	.45++	.34++
POD HEIGHT		.29+	.05	.22	-.09	.08	.11	.05	.34++	.19
100 SEED WEIGHT		.35++	-.17	-.12	-.03	.02	.03	.07	.50++	.52++
QUALITY OF SEED PERCENT GERM.		-.07	-.31+	-.21	-.16	-.23	.07	.17	-.07	-.01
		.21	-.01	-.13	.06	.19	.01	-.24	.09	.14

TABLE 141 EXPERIMENT 9 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
2	UFU-1	1.00	200.50	28.00	15.50	17.83	1.75	97.00	44.8	20.7
15	ECUADOR 1	1.00	144.25	49.50	16.75	21.90	2.00	93.00	44.7	22.4
10	IMPROVED PELICAN	1.00	189.50	37.25	16.25	15.98	2.00	98.00	44.2	22.3
13	BOSSIER	1.00	206.75	29.50	18.25	18.33	2.75	87650	45.5	19.2
14	WILLIAMS	1.00	196.50	23.00	11.25	21.38	2.50	91.75	43.2	21.6
9	JUPITER	1.00	180.00	51.00	15.25	16.75	1.75	95.00	44.9	19.3
1	CH-3	1.00	183.25	49.50	18.50	15.83	3.00	82.50	44.7	19.8
11	KAHALA	2.50	197.00	24.50	15.00	21.80	3.25	96.75	45.8	18.8
12	RILLITO	1.00	191.25	25.75	11.00	15.88	3.50	90.75	43.9	20.9
3	SJ-2	1.00	186.75	67.50	15.50	15.03	1.00	99.00	44.7	21.0
4	HARDEE LS	1.00	181.50	51.50	13.75	14.08	2.00	89.00	43.9	21.1
7	TUNIA	1.00	185.75	33.00	17.75	17.48	3.25	96.00	45.5	19.9
8	CARIBE	1.00	188.50	49.50	15.75	11.73	1.75	96.75	48.2	17.8
6	IAC-2	1.00	189.75	30.25	18.00	15.85	2.25	96.00	45.8	21.9
5	ORBA	3.00	180.00	43.75	14.50	11.68	2.00	91.50	43.2	20.3
16	ECUADOR 2	1.00	59.25	57.50	13.25	19.35	2.50	73.00	45.4	22.1
<hr/>										
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
25.77%										
5% LSD VARIETY MEANS (*****NS=NS)										
.45										
<hr/>										
CORRELATIONS (+ - PROB=.05										
(+ - PROB=.01)										
<hr/>										
YIELD	KG/HA	-.23	.33++	-.21	.29+	.35++	-.07	.21		
DAYS TO FLOWER		-.22	-.16	.48++	.05	-.17	-.31+	-.01		
DAYS TO MATURITY		-.35++	-.14	.46++	.22	-.12	-.21	-.13		
NUDULE ABUND 1		-.44++	-.08	.10	-.09	-.03	-.16	-.06		
NUDULE ABUND 2		-.16	.22	.03	.08	.02	-.23	-.19		
NUDULE ACT. 1		.30+	.07	-.20	.11	.03	.07	.01		
NUDULE ACT. 2		-.06	-.11	-.03	.05	.07	.17	-.24		
PLANT HEIGHT		-.02	.17	.45++	.34++	.50++	-.07	.09		
LODGING		.32++	.21	.34++	.19	.52++	-.01	.14		
SHATTER		1.00	.07	-.05	-.10	-.11	.12	-.02		
PLANTS HARVEST		.07	1.00	-.45++	.17	-.17	.00	.55++		
PODS PER PLANT		-.05	-.45++	1.00	.03	-.29+	-.33++	-.21		
POD HEIGHT		-.10	.17	.03	1.00	-.08	-.01	.17		
100 SEED WEIGHT		-.11	-.17	-.29+	-.08	1.00	.18	.00		
QUALITY OF SEED		.12	.00	-.33++	-.01	.18	1.00	-.19		
PERCENT GERM.		-.02	.55++	-.21	.17	.00	-.19	1.00		

TABLE I42 EXPERIMENT 31 YEAR 1978

REGION - SOUTH AMERICA
 COUNTRY - FRENCH GUIANA
 SITE - CAYENNE
 ELEVATION - 7 M
 LATITUDE - 4 DEG. 54 MIN. N
 LONGITUDE - 52 DEG. 18 MIN. W
 COOPERATOR - IRAT
 DATE PLANTED - MAY 5, 1978
 SOIL TYPE - SAND 49%, SILT 16.8%, CLAY 34.2%, PH 4.45
 FERTILIZER USED (KG/HA) - N 25.0, P 44.0, K 83.0
 AMOUNT OF MOISTURE - 1052 MM
 DATE HARVESTED - OCTOBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
15 RANSOM		3396.51	33.25	98.50	1.25	1.00	100.00	100.00	73.75	1.25
11 KAHALA		3396.51	36.00	110.25	2.00	2.00	100.00	100.00	58.63	1.25
12 RILLITO		3313.16	34.00	89.50	1.75	2.50	96.25	100.00	60.63	1.25
8 CARIBE		3167.30	41.00	115.50	1.25	1.00	98.75	100.00	69.25	1.50
7 TUNIA		3083.95	33.50	94.00	1.50	1.00	100.00	100.00	60.25	1.50
2 UFU-1		3046.44	34.00	96.75	1.25	1.50	100.00	100.00	44.53	1.00
4 HARDEE LS		3042.27	38.00	102.25	1.50	1.25	97.50	100.00	81.50	1.00
3 SJ-2		3021.44	32.75	87.50	1.00	1.75	98.75	100.00	63.75	1.50
14 WILLIAMS		2938.09	34.75	98.25	1.50	1.00	98.75	100.00	69.75	1.00
1 CH-3		2833.90	32.00	98.75	1.25	1.75	98.75	100.00	53.53	1.00
9 JUPITER		2813.06	32.00	91.75	1.25	1.00	100.00	100.00	42.63	1.50
6 IAC-2		2813.06	31.75	87.50	1.75	1.50	97.50	100.00	54.00	1.00
5 ORBA		2792.22	35.50	96.00	2.00	1.50	100.00	100.00	65.88	1.50
10 IMPROVED PELICAN		2679.70	35.50	104.75	1.75	1.00	98.75	100.00	64.75	1.50
16 COBB		2667.20	31.00	104.75	2.00	1.00	100.00	100.00	63.25	1.50
13 BOSSIER		2333.80	36.25	105.50	2.00	1.75	97.50	100.00	61.38	1.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)										
YIELD KG/HA	1.00	- .13	- .06	- .13	- .10	- .12	.00	.00	.15	-.18
DAYS TO FLOWER	-.13	1.00	.65++	.10	-.18	-.14	.00	.00	.41++	-.09
DAYS TO MATURITY	-.06	.65++	1.00	.21	-.23	-.04	.00	.00	.48++	.08
NODULE ABUND 1	-.13	*.10	*.21	1.00	*.21	-.15	.00	.00	-.03	.06
NODULE ABUND 2	-.10	-.18	-.23	*.21	1.00	-.19	.00	.00	-.31+	.04
NODULE ACT. 1	-.12	-.14	-.04	-.15	-.19	1.00	.00	.00	-.00	-.02
NODULE ACT. 2	-.00	*.00	*.00	.00	.00	1.00	.00	.00	.00	.00
PLANT HEIGHT	.15	*.41++	*.48++	-.03	-.31+	-.00	1.00	.00	.18	1.00
LODGING	-.18	*.09	*.08	*.06	*.04	-.02	.00	.00	.18	1.00
SHATTER	-.16	*.49++	*.82++	.07	-.15	-.02	.00	.00	.42++	.35++
PLANTS HARVEST	.07	-.32++	-.16	-.05	.12	.07	.00	.00	-.18	.13
PODS PER PLANT	.17	*.14	*.14	.11	.01	-.20	.00	.00	.45++	-.02
POD HEIGHT	-.10	*.50++	*.65++	.01	-.35++	.07	.00	.00	.74++	.33++
100 SEED WEIGHT	.16	-.53++	-.47++	-.10	.24	*.10	.00	.00	-.62++	-.06
QUALITY OF SEED	.06	*.20	-.09	-.06	*.18	.00	.00	.00	-.04	.02
PERCENT GERM.	-.11	-.28+	-.03	-.03	-.05	.00	.00	.00	.11	-.24

TABLE 142 EXPERIMENT 31 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
15	RANSOM	1.00	86.00	61.75	10.63	19.78	2.25	89.25	44.7	21.8
11	KAHALA	1.25	92.00	60.25	10.13	20.78	2.50	76.50	44.4	19.5
12	RILLITO	1.00	104.00	87.50	9.38	18.53	2.25	82.25	43.4	21.5
8	CARIBE	1.25	85.50	59.00	13.13	16.68	2.25	65.50	47.2	16.4
7	TUNIA	1.00	87.25	65.00	10.38	15.88	2.25	89.75	44.1	21.1
2	UFU-1	1.00	96.50	49.50	8.38	21.00	2.50	80.75	43.8	21.2
4	HARDEE LS	1.00	73.25	71.25	11.25	17.80	2.25	90.75	42.7	19.4
3	SJ-2	1.00	103.25	62.50	10.63	20.70	1.50	84.00	44.6	18.5
14	WILLIAMS	1.00	88.50	67.75	9.75	17.68	1.50	86.75	43.6	20.7
1	CH-3	1.00	80.50	65.25	8.88	19.40	3.00	84.50	44.1	19.2
9	JUPITER	1.00	90.00	49.25	8.00	22.70	3.00	84.00	41.9	22.6
6	IAC-2	1.00	99.75	67.25	9.50	18.95	1.25	84.00	44.2	22.1
5	ORBA	1.00	92.75	85.25	10.75	16.18	1.00	93.00	42.1	20.2
10	IMPROVED PELICAN	1.25	99.25	48.00	11.88	20.43	2.50	76.50	45.5	19.2
16	CORB	1.25	103.25	60.25	11.63	19.25	2.50	70.75	43.3	19.8
13	BOSSIER	1.00	94.75	55.50	9.63	17.68	2.50	85.25	44.7	22.6
GRAND MEAN		1.06	92.28	63.45	10.24	18.96	2.19	82.72		
VARIETY MEAN		1.13	8.93	11.79	1.52	1.91	.46	5.88		
STANDARD ERROR OF VARIETY MEAN		24.30%	19.35%	37.15%	29.60%	20.15%	42.49%	14.21%		
COEFFICIENT OF VARIATION		*****	*****	*****	*****	*****	*****	*****		
5% LSD VARIETY MEANS (*****=NS)		*****	*****	*****	*****	*****	*****	*****		
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	-.16	.07	.17	-.10	.16	.06	.32+		
DAY TO FLOWER		.49++	-.32++	.14	.50++	-.53++	.06	-.11		
DAY TO MATURITY		.82++	-.16	.14	.65++	-.47++	.20	-.28+		
NODEL ABUND 1		.07	-.05	.11	.01	-.10	.09	-.03		
NODEL ABUND 2		-.15	.12	.01	-.35++	.24	-.06	-.03		
NODULE ACT. 1		-.02	.07	-.20	.07	.10	.18	.05		
NODULE ACT. 2		.00	.00	.00	.00	.00	.00			
PLANT HEIGHT		.42++	-.18	.45++	.74++	-.62++	.04	.11		
LOGGING		.35++	.13	-.02	.33++	-.06	.02	-.24		
SHATTER		1.00	.16	.03	.68++	-.31++	.20	-.48++		
PLANTS HARVEST		1.16	1.00	-.48++	-.04	.44++	-.03	-.29+		
PODS PER PLANT		.03	-.48++	1.00	.22	-.60++	-.16	.26+		
POD HEIGHT		.68++	-.04	.22	1.00	-.54++	.01	-.20		
100 SEED WEIGHT		-.31+	.44++	-.60++	-.54++	1.00	.13	-.11		
QUALITY OF SEED		.20	-.03	-.16	.01	.13	1.00	-.30+		
PERCENT GERM.		-.48++	-.29+	.26+	-.20	-.11	-.30+	1.00		

TABLE 143 EXPERIMENT 158

YEAR 1978

REGION - SOUTH AMERICA	COUNTRY - PARAGUAY
SITE - CAACUPE	ELEVATION - 228 M
LATITUDE - 25 DEG. 24 MIN. S	LONGITUDE - 57 DEG. 6 MIN. W
COOPERATOR - JUSTO LOPEZ P.	DATE HARVESTED - MARCH, 1979
DATE PLANTED - NOVEMBER 13, 1978	SOIL TYPE - SAND 75.6%, SILT 12.0%, CLAY 12.4%, PH 5.5
AMOUNT OF FERTILIZER USED (KG/HA) - N 25.0, P 30.0, K 25.0	AMOUNT OF MOISTURE - 1022.5 MM
NUMBER OF IRRIGATIONS - 4	LOCAL VARIETIES - VISOJAY, GALLAXIA
	(23.0 MM)

TABLE 143 EXPERIMENT 158 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
9	DAVIS	1.25	272.25	28.78	.00	24.60	2.75	.00	44.5	21.2
6	VISOJA	1.00	178.25	71.25	.00	16.93	3.25	.00	42.5	19.4
16	CRAWFORD	1.00	145.75	42.30	.00	22.25	2.75	.00	45.3	19.1
11	CALLAND	1.00	240.00	29.70	.00	23.55	3.25	.00	42.9	20.2
1	IMPROVED PELICAN	1.25	197.00	58.28	.00	13.40	1.25	.00	42.2	20.9
7	JAMES	1.00	258.75	28.70	.00	20.88	2.25	.00	44.5	21.9
15	GALAXIA	1.00	137.75	38.65	.00	23.75	2.50	.00	45.8	18.2
2	RILLITO	1.00	159.50	51.35	.00	22.85	3.75	.00	45.9	19.3
14	MITCHELL	1.25	177.00	29.78	.00	22.05	2.75	.00	42.7	20.5
10	GASOY 17	1.00	190.25	53.00	.00	23.85	4.00	.00	43.0	20.2
12	FRANKLIN	1.25	239.75	24.05	.00	21.20	3.00	.00	41.9	22.3
13	CUTLER 71	1.25	252.75	29.38	.00	22.63	2.75	.00	43.5	21.5
4	WILLIAMS	1.50	223.25	26.75	.00	22.23	2.75	.00	44.0	21.0
3	BOSSIER	1.00	191.00	54.65	.00	23.25	4.50	.00	41.7	20.6
5	RANSOM	1.00	214.00	46.20	.00	24.73	5.00	.00	44.9	22.7
8	FORREST	1.00	172.75	31.68	.00	19.90	5.00	.00	44.4	19.6
STANDARD ERROR OF A VARIETY MEAN		1.11	203.13	40.28	.00	21.75	3.22	.00		
COEFFICIENT OF VARIATION		.14	17.08	4.29	.00	*.51	*.35	.00		
5% LSD VARIETY MEANS (*****=NS)		25.86%	16.82%	21.32%	.00%	4.70%	21.63%	.00%		
5% LSD VARIETY MEANS (*****=NS)		*****	48.65	12.23	.00	1.46	*.99	.00		
CORRELATIONS (+ - PROB=.05) ++ - PROB=.01)										
YIELD	KG/HA	-.08	.15	.14	.00	-.15	-.68++	.00		
DAYS TO FLOWER		-.13	-.24	.66++	.00	-.58++	-.05			
DAYS TO MATURITY		-.23	-.28+	.68++	.00	-.06	.41++			
NODEL ABUND 1		.00	.00	.00	.00	.00	.00			
NODEL ABUND 2		.00	.00	.00	.00	.00	.00			
NODEL ACT. 1		.00	.00	.00	.00	.00	.00			
NODEL ACT. 2		.00	.00	.00	.00	.00	.00			
PLANT HEIGHT		-.03	-.15	.46++	.00	-.67++	-.38++			
LODGING		.02	.08	.02	.00	-.48++	-.50++			
SHATTER		1.00	.14	-.24	.00	.02	-.15			
PLANTS HARVEST		.14	1.00	-.37++	.00	.15	-.12			
PODS PER PLANT		-.24	-.37++	1.00	.00	-.36++	.11			
POD HEIGHT		.00	.00	.00	1.00	.00	.00			
100 SEED WEIGHT		.02	.15	-.36++	.00	1.00	*.37++			
QUALITY OF SEED PERCENT GERM.		-.15	-.12	.11	.00	*.37++	1.00			
		.00	.00	.00	.00	.00	1.00			

TABLE 144 EXPERIMENT 10 YEAR 1978

REGION - SOUTH AMERICA
 STATE - EL PORVENTR
 LATITUDE - 6 DEG. 31 MIN. S
 COOPERATOR - ING. ARMANDO CUEVA - BENAVIDES
 DATE PLANTED - APRIL 13, 1978
 SOIL TYPE - SAND 38%, SILT 18%, CLAY 44%, PH 7.5
 AMOUNT OF MOISTURE - 379 MM

TABLE 144 EXPERIMENT 10 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
9	JUPITER	1.00	111.25	42.75	8.75	24.35	3.75	20.75	44.7	21.6
10	IMPROVED PLEICAN	1.00	145.25	46.75	7.58	15.43	3.25	18.25	43.9	19.9
3	SJ-2	2.00	112.00	52.50	7.58	16.33	3.75	48.50	45.0	18.2
4	HARDEE LS	1.25	73.00	76.50	6.15	21.78	4.50	5.50	42.9	21.4
2	UFV-1	2.00	118.25	39.50	5.88	18.85	3.75	23.25	45.5	19.3
13	BOSSIER	1.00	125.50	35.00	5.75	16.05	4.25	6.50	43.3	21.2
16	COBB	2.50	106.25	36.25	4.63	17.83	4.75	8.50	43.1	20.6
8	CARIBE	2.00	154.00	51.00	7.80	18.28	4.50	32.25	45.2	17.2
5	ORBA	3.00	198.50	31.25	7.00	11.53	3.00	77.50	42.9	19.7
12	RILLITO	1.00	116.75	38.25	4.50	15.40	3.50	9.25	40.3	16.0
15	RANSOM	1.75	174.00	30.25	4.38	16.68	4.25	4.25	41.1	19.8
1	CH-3	2.00	59.25	52.00	7.20	18.20	3.50	27.50	42.2	19.7
14	WILLIAMS	1.00	161.25	26.00	5.00	16.35	2.50	27.25	43.3	18.4
7	TUNIA	1.25	79.75	41.75	6.78	21.58	4.75	6.50	43.9	18.8
6	IAC-2	1.00	56.50	56.50	7.65	19.70	3.75	28.00	44.8	20.8
11	KAHALA	3.00	110.00	35.00	6.88	19.60	3.75	60.00		
	GRAND MEAN	1.67	118.84	43.20	6.45	17.99	3.84			25.23
	STANDARD ERROR OF A VARIETY MEAN	.17	20.82	4.71	.64	1.16	.37			5.70
	COEFFICIENT OF VARIATION	20.34%	35.04%	21.82%	19.78%	12.91%	19.27%			45.16%
	5% LSD VARIETY MEANS (*****=NS)	.48	59.32	13.43	1.82	3.31	1.05			16.23
	C O R R E L A T I O N S	(+ - PROB=.05	(+ - PROB=.01)							
	YIELD	KG/HA	-.12	*33++	.01	.21	-.04	-.05		
	DAYS TO FLOWER		-.14	*34++	.55++	.46++	.37++			
	DAYS TO MATURITY		-.12	*47++	.62++	.42++	.58++			
	NODULE ABUND 1		-.11	*16	.13	.01	.23			
	NODULE ABUND 2		-.12	*07	-.05	-.15	-.07			
	NODULE ACT. 1		-.13	*13	-.05	.14	-.30+			
	NODULE ACT. 2		-.15	*11	.28+	.23	.20			
	PLANT HEIGHT		-.10	*10	.25	.63++	-.03			
	LODGING		.00	*00	.00	.00	.00			
	SHATTER		1.00	*19	-.17	-.02	-.23			
	PLANTS HARVEST		*19	1.00	-.54++	.05	-.48++			
	PODS PER PLANT		-.17	*54++	1.00	.20	.35++			
	POD HEIGHT		-.02	*05	.20	1.00	.13			
	100 SEED WEIGHT		-.23	*48++	.35++	.13	1.00			
	QUALITY OF SEED		-.05	*15	.24	-.02	.33++			
	PERCENT GERM.		.54++	.21	-.11	.31+	-.31+			
							-.37++			
							1.00			

TABLE 145 EXPERIMENT 70 YEAR 1978

REGION -	SOUTH AMERICA	COUNTRY -	PERU
SITE -	EL PORVENIR	ELEVATION -	262 M
LATITUDE -	6 DEG. 31 MIN. S	LONGITUDE -	76 DEG. 21 MIN. W
COOPERATORS -	D. MALDONADO, L. LOPEZ	DATE HARVESTED -	JUNE, 1979
DATE PLANTED -	MARCH 1, 1979	SOIL TYPE -	SAND 43%, SILT 21%, CLAY 36%, PH 7
LOCAL VARIETIES -	TULUMAYO, NACIONAL		

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
9	IMPROVED PELICAN	2303.79	31.00	94.75	3.00	2.00	90.00	90.00	83.75	1.00
10	RILLITO	2206.27	25.75	81.50	3.25	2.25	77.50	95.00	62.50	1.00
15	DAVIS	2067.08	27.50	82.00	3.75	2.75	91.25	96.25	32.75	1.00
12	WILLIAMS	1997.07	23.00	78.50	3.50	1.50	83.75	82.50	57.50	1.25
2	SJ-2	1979.15	32.25	92.00	4.25	2.25	81.25	96.25	71.25	1.75
11	BOSSIER	1961.64	35.00	84.00	3.00	2.50	91.25	85.00	54.00	1.00
4	ORBA	1852.87	31.75	85.75	4.00	1.75	77.50	98.75	67.25	2.25
6	TUNIA	1848.70	28.00	92.50	3.50	2.25	72.50	91.25	66.50	1.50
5	IAC-2	1573.65	31.50	99.50	4.00	3.00	78.75	72.50	86.50	1.75
16	GASOY 17	1521.97	23.00	81.75	3.50	3.00	82.50	88.75	29.25	1.00
3	HARDEE LS	1491.13	42.00	97.00	4.00	3.25	96.25	76.25	83.00	1.25
1	UFV-1	1423.20	31.00	95.50	3.75	3.00	80.00	93.75	28.00	1.00
8	JUPITER	1393.20	29.75	97.25	3.75	3.00	87.50	96.25	75.50	1.00
7	CARIBE	685.55	32.00	118.50	4.00	1.75	87.50	95.00	100.50	2.25
13	TULUMAYO	286.72	50.00	111.50	3.50	3.50	82.50	72.50	109.50	2.00
14	NACIONAL	269.64	50.00	117.25	3.50	3.25	83.75	80.00	94.50	1.25
GRAND MEAN										
	STANDARD ERROR OF A VARIETY MEAN	1553.85	32.72	94.33	3.64	2.56	83.98	88.13	68.89	1.39
	COEFFICIENT OF VARIATION	204.63	.27	3.59	.34	.49	7.21	7.06	2.61	.24
5%	LSD VARIETY MEANS (*****=NS)	26.34%	1.64%	7.62%	18.74%	38.20%	17.17%	16.02%	7.57%	34.45%
		582.87	.76	10.23	*****	*****	*****	*****	7.43	.68

CORRELATIONS $(1 - \text{PROB} = .05 \quad ++ - \text{PROB} = .01)$

TABLE 145 EXPERIMENT 70 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
9	IMPROVED PELICAN	1.00	245.25	31.00	12.00	14.50	2.50	74.75
10	RILLITO	1.00	192.00	36.25	7.00	15.00	2.50	60.75
15	DAVIS	1.00	251.25	23.00	7.00	16.75	2.00	35.75
12	WILLIAMS	1.00	266.25	20.00	9.25	19.25	2.25	36.75
2	SJ-2	1.00	130.25	43.50	11.50	14.25	2.50	84.75
11	BOSSIER	1.00	204.75	25.25	13.25	14.00	2.50	44.75
4	ORBA	1.25	191.75	32.00	11.00	13.50	2.25	87.75
6	TUNIA	1.00	200.50	27.25	10.50	15.00	3.00	51.25
5	IAC-2	1.25	178.25	32.50	14.25	16.75	4.00	46.75
16	GASOY 17	1.00	238.50	16.50	7.25	17.00	2.00	49.25
3	HARDEE LS	1.25	239.00	34.25	16.25	13.75	4.50	15.75
1	UFV-1	1.00	78.25	41.50	4.25	18.75	3.00	61.25
8	JUPITER	1.00	190.50	32.25	11.75	15.50	3.50	78.50
7	CARIBE	2.00	181.75	37.25	13.00	11.25	4.50	16.75
13	TULUMAYO	1.00	118.50	26.25	13.00	24.00	4.75	20.25
14	NACIONAL	2.25	102.25	25.25	12.75	20.25	4.75	26.50
STANDARD ERROR OF A VARIETY MEAN		GRAND MEAN	1.19	188.06	30.25	10.88	16.22	3.16
COEFFICIENT OF VARIATION		*16	14.65	3.84	*.98	2.31	*.28	10.48
5% LSD VARIETY MEANS (*****=NS)		27.72%	15.58%	25.39%	18.05%	28.48%	17.55%	42.38%
		.47	41.72	10.94	2.80	*****	.79	29.86
CORRELATIONS (+ - PROB=.05) ++ - PROB=.01)								
YIELD KG/HA								
DAYS TO FLOWER								
DAYS TO MATURITY								
NODULE ABUND 1								
NODULE ABUND 2								
NODULE ACT. 1								
NODULE ACT. 2								
PLANT HEIGHT								
LODGING								
SHATTER								
PLANTS HARVEST								
PODS PER PLANT								
POD HEIGHT								
100 SEED WEIGHT								
QUALITY OF SEED PERCENT								

TABLE 146 EXPERIMENT 215 YEAR 1978

REGION - SOUTH AMERICA
 SITE - HUANCAYO
 LATITUDE - 11 DEG. 54 MIN. S
 COOPERATOR - CARLOS ALBERTO LOAYZA
 DATE PLANTED - JULY 6, 1978
 SUBSTITUTE VARIETIES - JUPITER, IMPROVED FELICAN
 LOCAL VARIETY - NACIONAL

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING	C O R R E L A T I O N S	
											(+ - PROB=.05	(+ - PROB=.01)
2	CALLAND	2030.82	.00	85.25	.00	.00	.00	.00	.00	.00	21.30	.00
4	CUTLER 71	1912.05	.00	90.00	.00	.00	.00	.00	.00	.00	20.65	.00
3	FRANKLIN	1636.16	.00	86.75	.00	.00	.00	.00	.00	.00	19.40	.00
15	IMPROVED FELICAN	1628.24	.00	89.50	.00	.00	.00	.00	.00	.00	32.25	.00
6	JUPITER	1601.57	.00	108.00	.00	.00	.00	.00	.00	.00	37.20	.00
12	COLUMBUS	1447.79	.00	91.25	.00	.00	.00	.00	.00	.00	20.30	.00
9	HARCOR	1314.85	.00	88.50	.00	.00	.00	.00	.00	.00	20.60	.00
7	NACIONAL	1277.76	.00	130.00	.00	.00	.00	.00	.00	.00	56.40	.00
10	HODGSON	1191.49	.00	87.50	.00	.00	.00	.00	.00	.00	16.70	.00
11	ELF	1156.06	.00	83.25	.00	.00	.00	.00	.00	.00	13.95	.00
14	CORSOY	1075.63	.00	90.75	.00	.00	.00	.00	.00	.00	17.90	.00
5	MITCHELL	1033.96	.00	88.75	.00	.00	.00	.00	.00	.00	22.20	.00
13	UNION	1031.04	.00	87.75	.00	.00	.00	.00	.00	.00	21.75	.00
1	WILLIAMS	978.53	.00	86.50	.00	.00	.00	.00	.00	.00	20.25	.00
16	CRAWFORD	768.49	.00	89.00	.00	.00	.00	.00	.00	.00	22.75	.00
8	STEELE	737.65	.00	79.25	.00	.00	.00	.00	.00	.00	20.25	.00
		GRAND MEAN	1301.38	.00	91.38	.00	.00	.00	.00	.00	24.03	.00
		STANDARD ERROR OF A VARIETY MEAN	327.46	.00	1.16	.00	.00	.00	.00	.00	1.64	.00
		COEFFICIENT OF VARIATION	50.33%	.00%	2.54%	.00%	.00%	.00%	.00%	.00%	13.68%	.00%
		5% LSD VARIETY MEANS (**NS=NS)	*****	.00	3.31	.00	.00	.00	.00	.00	4.68	.00
		YIELD	KG/HA	1.00	.00	.08	.00	.00	.00	.00	.09	.00
		DAYS TO FLOWER		.00	1.00	.00	.00	.00	.00	.00	.00	.00
		DAYS TO MATURITY		.08	.00	1.00	.00	.00	.00	.00	.89++	.00
		NODULE ABUND 1		.00	.00	1.00	.00	.00	.00	.00	.00	.00
		NODULE ABUND 2		.00	.00	.00	1.00	.00	.00	.00	.00	.00
		NODULE ACT. 1		.00	.00	.00	.00	1.00	.00	.00	.00	.00
		NODULE ACT. 2		.00	.00	.00	.00	.00	1.00	.00	.00	.00
		PLANT HEIGHT		.09	.00	.89++	.00	.00	.00	.00	1.00	.00
		LODGING		.00	.00	.00	.00	.00	.00	.00	.00	.00
		SHATTER		.22	.00	-.45++	.00	.00	.00	.00	-.35++	.00
		PLANTS HARVEST		.24	.00	-.38++	.00	.00	.00	.00	-.46++	.00
		PODS PER PLANT		.68++	.00	.20	.00	.00	.00	.00	.33++	.00
		POD HEIGHT		.04	.00	.87++	.00	.00	.00	.00	.87++	.00
		100 SEED WEIGHT		.14	.00	.46++	.00	.00	.00	.00	.25++	.00
		QUALITY OF SEED		.08	.00	.25+	.00	.00	.00	.00	.02	.00
		PERCENT GERM.		-.18	.00	-.20	.00	.00	.00	.00	-.16	.00

TABLE 146 EXPERIMENT 215 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
2	CALLAND	4.75	220.50	15.40	3.98	16.78	3.75	5.25	44.9
4	CUTLER 71	4.00	178.50	19.60	3.90	16.78	4.00	80.75	45.5
3	FRANKLIN	5.00	176.25	18.25	3.08	15.50	4.00	*.00	44.4
15	IMPROVED PELICAN	2.75	131.50	30.75	4.25	12.03	2.25	4.00	20.8
6	JUPITER	2.00	130.75	28.40	7.05	13.25	2.00	20.00	46.6
12	COLUMBUS	3.75	145.50	18.65	3.18	16.50	3.50	69.50	46.3
9	HARCOR	.75	188.50	12.50	3.20	17.75	4.25	*.00	44.9
7	NACIONAL	1.00	97.50	17.65	14.88	21.83	5.00	1.25	48.7
10	HODGSON	1.50	170.00	14.20	3.15	16.28	4.25	1.25	18.8
11	ELF	3.50	189.25	10.85	3.05	15.78	3.25	1.00	43.7
14	CORSOY	1.50	176.00	9.50	2.80	19.53	5.00	1.00	45.0
5	MITCHELL	4.25	105.50	19.35	3.93	16.03	3.25	1.00	43.9
13	UNION	2.75	199.75	9.55	3.28	16.00	3.00	86.25	45.6
1	WILLIAMS	3.00	192.25	9.35	3.70	16.55	3.00	40.00	45.9
16	CRAWFORD	2.50	80.25	19.25	2.98	16.10	2.00	97.25	45.3
6	STEELE	3.50	130.75	12.45	3.68	13.25	2.75	73.25	44.1
GRAND MEAN									
STANDARD ERROR OF A VARIETY MEAN									
COEFFICIENT OF VARIATION									
5% LSD VARIETY MEANS (*****=NS)									
CORRELATIONS (+ - PROB=.05) ++ - PROB=.01)									
YIELD KG/HA									
DAYS TO FLOWER									
DAYS TO MATURITY									
NODULE ABUND 1									
NODULE ABUND 2									
NODULE ACT. 1									
NODULE ACT. 2									
PLANT HEIGHT									
LODGING									
SHATTER									
PLANTS HARVEST									
PODS PER PLANT									
POD HEIGHT									
100 SEED WEIGHT									
QUALITY OF SEED									
PERCENT GERM.									

TABLE 147 EXPERIMENT 40 YEAR 1978

REGION - SOUTH AMERICA COUNTRY - PERU
 SITE - HUARANGOFAMPA - BAGUA ELEVATION - 500 M
 LATITUDE - 5 DEG. 40 MIN. S LONGITUDE - 78 DEG. 36 MIN. E
 COOPERATOR - ING. UBALDO CESAR ARCAYA MACEDA
 DATE PLANTED - SEPTEMBER 14, 1978 DATE HARVESTED - DECEMBER, 1978
 SOIL TYPE - SAND 22.1%, SILT 51.0%, CLAY 26.9%, FH 7.8
 AMOUNT OF MOISTURE - 182 MM
 NUMBER OF IRRIGATIONS - 8 (182 MM)
 LOCAL VARIETY - NACIONAL
 SUBSTITUTE VARIETY - IMPROVED PELICAN-PERU

TABLE 147 EXPERIMENT 40 YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS PER HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
13	HARDEE	.00	147.00	.00	.00	.00	.00	2.00	97.00	39.5
7	JUFITER	.00	197.00	.00	.00	.00	.00	2.00	95.75	37.3
12	TUNIA	.00	192.00	.00	.00	.00	.00	2.00	96.50	41.8
2	CARIBE	.00	156.00	.00	.00	.00	.00	2.00	97.25	44.3
16	BOSSIER	.00	200.50	.00	.00	.00	.00	2.00	96.00	41.7
1	NACIONAL	.00	123.75	.00	.00	.00	.00	2.00	95.75	43.5
4	CH-3	.00	167.00	.00	.00	.00	.00	3.00	96.75	42.6
5	SJ-2	.00	154.00	.00	.00	.00	.00	3.00	97.50	40.8
9	IAC-2	.00	167.50	.00	.00	.00	.00	2.00	96.00	41.5
3	UFV-1	.00	150.25	.00	.00	.00	.00	2.00	97.00	40.9
6	ORBA	.00	184.25	.00	.00	.00	.00	3.00	96.00	38.4
10	WILLIAMS	.00	217.75	.00	.00	.00	.00	2.00	97.00	42.8
8	RILLITO	.00	159.50	.00	.00	.00	.00	2.00	97.50	42.0
14	IMPROVED PELICAN - PERU	.00	87.75	.00	.00	.00	.00	2.00	96.50	40.5
15	IMPROVED PELICAN	.00	215.25	.00	.00	.00	.00	2.00	96.75	42.1
11	KAHALA	.00	201.00	.00	.00	.00	.00	3.00	96.50	41.9
	GRAND MEAN	.00	170.03	.00	.00	.00	.00	2.25	96.61	
	STANDARD ERROR OF A VARIETY MEAN	.00	16.23	.00	.00	.00	.00	.00	.34	
	COEFFICIENT OF VARIATION	.00%	19.10%	.00%	.00%	.00%	.00%	.00%	.70%	
	5% LSD VARIETY MEANS (*****=NS)	.00	46.24	.00	.00	.00	.00	.00	.97	
	C O R R E L A T I O N S	(+ - PROB=.05		(+ - PROB=.01)						
	YIELD KG/HA	.00	+25+	.00	.00	.00	.00	.11	.04	
	DAYS TO FLOWER	.00	-*35++	.00	.00	.00	.00	-0.07	-0.20	
	DAYS TO MATURITY	.00	-*25+	.00	.00	.00	.00	-32++	.05	
	NUDULE ABUND 1	.00	-*08	.00	.00	.00	.00	-0.09	.22	
	NUDULE ABUND 2	.00	-*10	.00	.00	.00	.00	.05	.10	
	NUDULE ACT. 1	.00	-*18	.00	.00	.00	.00	-45++	-1.16	
	NUDULE ACT. 2	.00	*09	.00	.00	.00	.00	.05	-1.14	
	PLANT HEIGHT	.00	-*11	.00	.00	.00	.00	.07	-1.10	
	LOGGING	.00	*00	.00	.00	.00	.00	.00	.00	
	SHATTER	1.00	*00	.00	.00	.00	.00	.00	.00	
	PLANTS HARVEST	.00	1.00	.00	.00	.00	.08	.02		
	PODS PER PLANT	.00	*00	1.00	.00	.00	.00	.00	.00	
	POD HEIGHT	.00	*00	*00	1.00	*00	*00	*00	*00	
	100 SEED WEIGHT	.00	*00	*00	*00	1.00	*00	*00	*00	
	QUALITY OF SEED	.00	*08	*00	*00	*00	1.00	*00	*06	
	PERCENT GERM.	.00	*02	*00	*00	*00	*06	1.00		

TABLE 148 EXPERIMENT 46 YEAR 1978

REGION - SOUTH AMERICA
 SITE - LA MOLINA
 LATITUDE - 12 DEG. 05 MIN. S
 COOPERATOR - JOSE BRUNO
 DATE PLANTED - DECEMBER 6, 1978
 SOIL TYPE - SAND 50.8%, SILT 25.0%, CLAY 24.7%, PH 8.0
 AMOUNT OF MOISTURE - 390 MM
 NUMBER OF IRRIGATIONS - 5 (390 MM)
 LOCAL VARIETIES - NACIONAL, MANDARIN S4-ICA

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
14	MANDARIN S4-ICA	4246.27	52.50	133.00	3.75	2.50	100.00	100.00	93.75	3.75
6	TUNIA	3962.88	50.50	130.00	4.00	4.00	100.00	100.00	69.25	1.75
15	DAVIS	3901.61	48.75	128.25	3.50	3.00	100.00	98.75	56.00	1.00
11	BOSSIER	3479.03	48.75	127.25	4.00	4.00	100.00	100.00	52.00	1.25
9	IMPROVED FELICAN	3220.64	58.25	130.00	4.00	3.50	96.25	93.75	95.75	2.25
7	CARIBE	2981.43	57.25	140.00	4.00	2.00	98.75	98.75	84.50	3.00
13	NACIONAL	2963.93	66.50	139.50	4.00	2.75	98.75	100.00	90.00	2.25
5	TAC-2	2825.98	57.50	134.00	3.75	2.75	98.75	100.00	84.00	1.50
4	ORBA	2783.89	54.50	129.75	3.50	3.50	96.25	100.00	82.25	3.25
16	GASOY 17	2552.18	40.00	123.50	4.00	4.00	98.75	100.00	36.00	1.00
3	HARDEE LS	2474.24	63.75	138.00	4.00	1.50	95.00	100.00	74.00	1.50
1	UFU-1	2397.15	59.25	136.00	4.00	4.00	100.00	100.00	50.00	1.00
10	RILLITO	2380.89	41.25	110.00	4.25	4.00	98.75	98.75	41.75	1.00
2	SJ-2	2196.27	54.25	133.00	4.25	3.75	98.75	100.00	76.00	1.50
8	JUPITER	1798.69	69.75	150.50	4.00	3.50	95.00	96.25	78.25	1.50
12	WILLIAMS	1634.49	32.00	100.00	4.00	4.00	100.00	100.00	98.75	1.00
GRAND MEAN		2862.47	53.42	130.17	3.94	3.30	98.44	99.06	68.27	1.78
STANDARD ERROR OF A VARIETY MEAN		357.35	1.75	1.00	.26	.49	2.00	1.82	4.79	.36
COEFFICIENT OF VARIATION		24.97%	6.56%	1.53%	13.45%	29.68%	4.07%	3.68%	14.04%	40.08%
5% LSD VARIETY MEANS (*****=NS)		1017.89	4.99	2.84	*****	1.39	*****	*****	13.65	1.02
CORRELATIONS (+ - PROB=.05 + - PROB=.01)										
YIELD	KG/HA	1.00	.03	.09	-.27+	-.18	.20	.02	.38++	
DAYS TO FLOWER	FLOWER	.03	1.00	.87+	-.04	-.29+	-.30+	-.08	.59++	.18
DAYS TO MATURITY		.09	.87+	1.00	-.06	-.30+	-.21	-.02	.57++	.25+
NODULE ABUND 1		-.27+	-.04	-.06	1.00	.37+	-.01	.01	-.08	-.22
NODULE ABUND 2		-.18	-.29+	-.30+	.37+	1.00	.21	.15	-.38++	-.30+
NODULE ACT. 1		-.20	-.30+	-.21	-.01	.21	1.00	.18	-.06	.10
NODULE ACT. 2		.02	-.08	-.02	.01	.15	.18	1.00	-.26+	-.15
PLANT HEIGHT		.38++	.59++	.57++	-.08	.38+	-.06	-.26+	1.00	.71++
LOGGING		.38++	.18	.25+	-.22	-.30+	.10	-.15	.71++	1.00
SHATTER		-.28+	-.26+	-.43++	-.09	.18	-.25+	.07	-.18	.04
PLANTS HARVEST		.13	-.53++	-.50++	-.05	.29+	.18	-.08	-.24	-.04
PODS PER PLANT		.44++	.47++	.54++	-.16	.45++	-.06	.04	.61++	.47++
POD HEIGHT		.38++	.57++	.58++	-.12	-.24	-.04	.09	.79++	.55++
100 SEED WEIGHT		.38++	-.36++	-.31+	-.13	.14	.22	.01	-.27+	-.13
QUALITY OF SEED		-.30+	-.44++	-.43++	.09	-.01	-.07	.01	-.42++	-.29+
PERCENT GERM.		.00	.00	.00	.00	.00	.00	.00	.00	.00

TABLE 148 EXPERIMENT 46 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
14	MANDARIN SA-ICA	1.00	165.50	54.75	16.85	17.75	1.50	.00	39.9	21.8
6	TUNIA	1.00	223.25	33.50	12.93	19.75	2.00	.00	39.6	22.4
15	DAVIS	1.00	227.75	33.50	10.48	19.98	2.00	.00	40.6	21.6
11	BOSSIER	1.00	205.00	34.75	12.88	17.63	2.00	.00	39.0	22.5
9	IMPROVED PELICAN	1.50	239.75	38.50	14.15	14.05	1.50	.00	40.2	21.2
7	CARIBE	1.00	207.25	38.50	13.55	11.38	2.00	.00	38.8	19.6
13	NACIONAL	1.00	169.75	25.75	17.90	19.55	1.25	.00	39.8	19.4
5	IAC-2	1.00	184.75	48.25	14.55	13.30	1.75	.00	38.4	22.0
4	ORBA	3.00	188.75	37.00	16.45	13.38	1.75	.00	36.4	20.0
16	GASOY 17	1.00	249.25	22.75	7.83	18.18	3.00	.00	37.7	22.0
3	HARDEE LS	1.25	149.25	48.25	12.05	12.30	2.50	.00	39.5	19.8
1	UFV-1	1.00	145.00	31.00	9.70	14.83	1.50	.00	39.9	21.8
10	RILLITO	2.00	202.25	17.25	7.15	15.85	3.50	.00	39.8	22.4
2	SJ-2	1.50	177.50	38.00	13.63	11.73	2.00	.00	35.9	21.9
8	JUPITER	1.00	167.50	32.75	13.30	14.43	1.75	.00	39.7	21.0
12	WILLIAMS	2.00	262.50	9.00	5.88	17.55	2.25	.00	38.8	22.1
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)										
YIELD KG/HA										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE ABUND 1										
NODULE ABUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
PLANT HEIGHT										
LOGGING										
SHATTER										
PLANTS HARVEST										
PODS PER PLANT										
POD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										

TABLE 149

EXPERIMENT 213 YEAR 1978

REGION - SOUTH AMERICA
 SITE - SULLANA
 LATITUDE - 4 DEG. 51 MIN. S LONGITUDE - 80 M
 COOPERATORS - ING. MANUEL GUERRERO RENTERIA AND TEC. A. ROBERTO FERREZ LAZO
 DATE PLANTED - JULY 6, 1978 DATE HARVESTED - OCTOBER, 1978
 SOIL TYPE - SAND 36.27%, SILT 35.06%, CLAY 28.67%, PH 8.03
 AMOUNT OF MOISTURE - 814 MM
 NUMBER OF IRRIGATIONS - 5 (814 MM)
 SUBSTITUTE VARIETY - JUFITER
 LOCAL VARIETY - NACIONAL

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND		NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
					1	2				
6	JUPITER	1724.26	41.00	104.00	.00	.00	.00	.00	64.03	1.50
15	NACIONAL	1544.98	51.25	104.25	.00	.00	.00	.00	66.08	1.00
1	WILLIAMS	1120.43	27.00	70.00	.00	.00	.00	.00	23.08	3.00
5	MITCHELL	1027.08	25.00	72.25	.00	.00	.00	.00	28.70	2.50
7	IMPROVED PELICAN	896.01	38.00	81.00	.00	.00	.00	.00	39.83	1.00
2	CALLAND	860.80	25.00	73.50	.00	.00	.00	.00	26.48	3.00
12	COLUMBUS	813.29	24.50	76.25	.00	.00	.00	.00	23.33	2.75
13	UNION	799.12	27.00	70.00	.00	.00	.00	.00	23.80	2.75
4	CUTLER 71	760.36	28.00	72.75	.00	.00	.00	.00	26.03	4.00
16	CRAWFORD	699.72	25.00	71.25	.00	.00	.00	.00	24.98	2.25
11	ELF	659.09	24.00	69.25	.00	.00	.00	.00	17.45	1.25
3	FRANKLIN	599.91	26.00	71.25	.00	.00	.00	.00	21.20	2.00
8	STEELE	541.15	27.00	70.00	.00	.00	.00	.00	18.78	1.25
14	CORSOY	423.33	26.00	71.25	.00	.00	.00	.00	14.85	1.25
10	HODGSON	405.50	27.00	68.50	.00	.00	.00	.00	14.85	1.75
9	HARCOR	382.78	26.00	69.75	.00	.00	.00	.00	13.15	2.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****NS=NS)										
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00	*42++	*55++	.00	.00	.00	.00	*70++	.06
DAYS TO FLOWER		*42++	1.00	*89++	.00	.00	.00	.00	*85++	-.43++
DAYS TO MATURITY		*55++	*89++	1.00	.00	.00	.00	*92++	-.32+	
NODULE ABUND 1		*00	*00	*00	1.00	*00	*00	*00	*00	
NODULE ABUND 2		*00	*00	*00	*00	1.00	*00	*00	*00	
NODULE ACT. 1		*00	*00	*00	*00	*00	1.00	*00	*00	
NODULE ACT. 2		*00	*00	*00	*00	*00	*00	1.00	*00	
PLANT HEIGHT		*70++	*85++	*92++	*00	*00	*00	*00	*00	-.21
LODGING		*06	-.43++	-.32+	*00	*00	*00	*00	-.21	1.00
SHATTER		*06	*25+	*17	*00	*00	*00	*00	*14	.10
PLANTS HARVEST		*48++	*10	*13	*00	*00	*00	*00	*29+	.04
PODS PER PLANT		*78++	*52++	*64++	*00	*00	*00	*00	*73++	-.15
FOD HEIGHT		*52++	*85++	*86++	*00	*00	*00	*00	*89++	-.33++
100 SEED WEIGHT		*61++	*37++	*44++	*00	*00	*00	*00	*51++	.04
QUALITY OF SEED GERM.		*00	*00	*00	*00	*00	*00	*00	*00	
		*00	*00	*00	*00	*00	*00	*00	*00	

TABLE 149

EXPERIMENT 213 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
6	JUPITER	1.00	195.00	18.00	13.90	18.63	.00	.00	40.3
15	NACIONAL	3.00	191.50	15.25	15.53	26.33	.00	.00	41.3
1	WILLIAMS	1.25	175.00	9.00	6.53	18.00	.00	.00	43.3
5	MITCHELL	1.50	201.75	10.75	6.58	16.63	.00	.00	40.0
7	IMPROVED PELICAN	1.00	183.00	13.50	8.75	12.13	.00	.00	41.6
2	CALLAND	1.50	180.25	7.00	6.73	18.25	.00	.00	42.0
12	COLUMBUS	1.75	161.00	10.75	6.13	15.50	.00	.00	44.9
13	UNION	1.25	202.00	7.50	6.03	16.13	.00	.00	43.2
4	CUTLER 71	2.00	149.75	8.50	6.50	16.13	.00	.00	42.6
16	CRAWFORD	1.25	115.50	6.75	5.25	16.63	.00	.00	43.2
11	ELF	1.25	190.50	9.50	6.40	15.00	.00	.00	41.6
3	FRANKLIN	2.50	163.00	9.00	7.03	14.25	.00	.00	42.0
8	STEELE	1.50	175.25	7.00	7.45	13.13	.00	.00	42.4
14	CORSOY	1.50	163.50	7.75	4.15	17.23	.00	.00	44.9
10	HODGSON	1.50	141.75	7.50	5.83	15.00	.00	.00	42.4
9	HARCOR	1.25	152.75	8.75	4.33	12.50	.00	.00	43.4
	GRAND MEAN	1.56	171.34	9.78	7.32	16.34	.00	.00	40.3
	STANDARD ERROR OF A VARIETY MEAN	.36	20.83	1.44	.66	1.65	.00	.00	41.3
-297-	COEFFICIENT OF VARIATION	46.62%	24.32%	29.34%	18.14%	20.24%	.00%	.00%	43.3
52	LSD VARIETY MEANS (*****=NS)	1.04	*****	4.09	1.89	4.71	.00	.00	40.0
	C O R R E L A T I O N S		(+ - PROB=.05		(+ - PROB=.01)				
	YIELD	KG/HA	.06	.48++	.78++	.52++	.61++	.00	.00
	DAYS TO FLOWER	.25+	.10	.52++	.85++	.37++	.00	.00	.00
	DAYS TO MATURITY	.17	.13	.64++	.86++	.44++	.00	.00	.00
	NODEL ABUND 1	.00	.00	.00	.00	.00	.00	.00	.00
	NODEL ABUND 2	.00	.00	.00	.00	.00	.00	.00	.00
	NODEL ACT. 1	.00	.00	.00	.00	.00	.00	.00	.00
	NODEL ACT. 2	.00	.00	.00	.00	.00	.00	.00	.00
	PLANT HEIGHT	.14	.29+	.73++	.89++	.51++	.00	.00	.00
	LODGING	.10	.04	-.15	-.33++	.04	.00	.00	.00
	SHATTER	1.00	.03	-.00	.24	.28+	.00	.00	.00
	PLANTS HARVEST	.03	1.00	.30+	.21	.25+	.00	.00	.00
	PODS PER PLANT	-.00	.30+	1.00	.59++	.41++	.00	.00	.00
	POD HEIGHT	.24	.21	.59++	1.00	.45++	.00	.00	.00
	100 SEED WEIGHT	.28+	.25+	.41++	.45++	1.00	.00	.00	.00
	QUALITY OF SEED	.00	.00	.00	.00	.00	1.00	.00	.00
	PERCENT GERM.	.00	.00	.00	.00	.00	.00	1.00	.00

TABLE 150

EXPERIMENT 47 YEAR 1978

REGION - SOUTH AMERICA
 SITE - TINGO MARIA
 LATITUDE - 9 DEG. 45 MIN. S
 COOPERATOR - PEDRO RUIZ CUBILLAS
 SOIL TYPE - SAND 31%, SILT 29%, CLAY 40%, PH 5.8
 DATE PLANTED - JUNE 21, 1978
 DATE HARVESTED - OCTOBER, 1978
 LOCAL VARIETY - X-TULUMAYO

COUNTRY - PERU

ELEVATION - 610 M

LONGITUDE - 75 DEG. 54 MIN. W

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
13	X-TULUMAYO	2397.56	51.00	128.00	2.50	2.75	68.75	30.00	88.62	2.00
8	JUPITER	1845.37	45.00	105.00	3.00	2.50	76.25	30.00	46.75	1.75
2	SJ-2	1745.77	37.00	105.00	3.00	2.75	87.50	45.00	45.30	1.50
9	IMPROVED PELICAN	1695.76	35.00	91.00	3.50	2.75	85.00	38.75	43.18	1.50
15	DAVIS	1599.90	35.00	105.00	2.75	2.25	93.75	40.00	25.45	1.00
3	HARDEE LS	1561.56	45.00	111.00	2.75	2.50	38.75	31.25	32.53	1.25
6	TUNIA	1424.03	34.00	105.00	2.25	2.00	88.75	43.75	33.08	1.25
5	TAC-2	1300.26	35.00	99.00	3.00	2.50	96.25	60.00	34.90	1.00
12	WILLIAMS	1244.00	30.00	81.50	2.50	2.50	78.75	7.50	27.75	2.00
1	UFV-1	1241.91	35.00	99.00	2.75	2.75	87.50	23.75	27.00	1.25
14	COBB	1194.82	30.00	91.50	2.75	2.75	93.75	45.00	22.63	1.00
7	CARIBE	971.86	35.00	91.50	3.25	2.75	92.50	35.00	35.15	1.00
11	BOSSIER	961.44	33.00	91.50	2.25	2.75	90.00	18.75	32.10	1.00
4	ORBA	869.34	37.00	83.00	2.00	2.00	91.25	22.50	34.33	1.25
16	GASOY 17	680.97	30.00	81.50	2.50	2.25	87.50	11.25	21.15	1.50
10	RILLITO	575.11	30.00	88.50	2.25	2.25	90.00	2.50	27.33	1.00
(+ - PROB=.05 + + - PROB=.01)										
CORRELATIONS										
YIELD	KG/HA	1.00	*64++	.70++	.29+	*10	-33++	*25+	*58++	.36++
DAYS TO FLOWER		*64++	1.00	.82++	.08	.16	-49++	*18	*74++	.31+
DAYS TO MATURITY		*70++		1.00	.09	.14	-37++	*35++	*66++	.17
NODULE ABUND 1		*29+		*08	1.00	.06	-06	*27+	*18	.13
NODULE ABUND 2		*10		*16	.14	.06	-02	-01	*15	.07
NODULE ACT. 1		-33++		-49++	-37++	-06	-02	1.00	-10	-12
NODULE ACT. 2		*25+		*18	.35++	.27+	-01	*10	1.00	.05
PLANT HEIGHT		*58++		*74++	.66++	.18	.15	-24	.05	.40++
LOGGING		*36++		*31+	.17	.13	.07	-12	-07	1.00
SHATTER		-.06		-.13	-.17	-.14	-.11	*04	-.17	.18
PLANTS HARVEST		*10		*02	-.09	-.16	.15	.13	-.11	.08
PODS PER PLANT		*52++		*58++	*57++	.30+	.04	-56++	*23	*48++
100 POD WEIGHT		*64++		*74++	.75++	.01	*19	-34++	*12	*80++
QUALITY OF SEED		*47++		*19	.45++	.03	-.17	-.14	*16	*25++
PERCENT GERM.		-.41++		-.31+	-.27+	-.17	-.09	.13	-.21	-.13
		.19		*24	.15	.08	.15	.09	.24	.36++

TABLE 150 EXPERIMENT 47 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	FOD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
13	X-TULUMAYO	1.00	200.50	26.25	15.30	18.50	2.25	86.75	44.5	18.9
8	JUPITER	1.00	166.25	22.00	6.70	17.48	2.50	48.50	41.7	23.8
2	SJ-2	1.00	158.75	30.50	7.60	14.50	1.00	94.25	44.1	20.0
9	IMPROVED PELICAN	1.00	175.75	20.25	6.25	14.20	1.00	65.75	42.9	17.4
15	DAVIS	1.00	178.00	14.75	5.55	18.00	1.00	40.00	41.2	18.8
3	HARDEE LS	1.00	132.75	33.25	6.85	15.45	1.25	37.50	43.9	21.9
6	TUNIA	1.00	120.25	22.75	6.50	20.85	2.50	61.25	43.4	21.1
5	IAC-2	1.00	111.00	22.50	5.90	16.75	3.00	86.75	41.6	23.0
12	WILLIAMS	1.25	193.75	14.50	5.45	18.55	2.00	72.00	42.0	21.0
1	UFV-1	1.00	202.75	13.50	5.20	14.75	1.00	88.75	41.7	17.6
14	COBB	1.00	195.50	14.00	4.10	16.98	3.00	33.00	40.2	20.9
7	CARIBE	1.00	146.50	17.75	4.60	12.25	2.50	78.25	46.4	17.5
11	BOSSIER	1.00	193.50	12.00	6.00	12.48	3.50	33.75	42.9	18.4
4	ORBA	1.00	180.50	17.00	4.95	12.63	1.50	91.25	40.7	19.0
16	GASOY 17	1.00	196.50	11.50	5.00	13.60	3.50	42.00	41.5	19.9
10	RILLITO	1.00	113.50	14.50	4.15	14.03	3.75	24.25	41.8	21.1
STANDARD ERROR OF A VARIETY MEAN		1.02	166.61	19.19	6.26	15.69	2.20	61.50		
COEFFICIENT OF VARIATION		.06	15.32	2.24	.48	.57	.24	5.57		
5% LSD VARIETY MEANS (*****=NS)		12.31%	18.39%	23.30%	15.21%	7.27%	21.48%	18.11%		
*****		43.64	6.37	1.36	1.62	.67	.67	15.87		
CORRELATIONS (+ - PROB=.05) ++ - PROB=.01)										
YIELD	KG/HA	-.06	.10	.52++	.64++	.47++			.19	
DAYS TO FLOWER		-.13	.02	.58++	.74++	.19			.24	
DAYS TO MATURITY		-.17	-.09	.57++	.75++	.45++			.15	
NODEL ABUND 1		-.14	-.16	.30+	.01	.03			.08	
NODEL ABUND 2		-.11	.15	.04	.19	-.17			.17	
NODEL ACT. 1		.04	.13	-.56++	-.34++	-.14			.13	
NODEL ACT. 2		-.17	-.11	.23	.12	.16			.24	
PLANT HEIGHT		-.09	.08	.48++	.80++	.25+			.13	
LONGING		.18	.21	.09	.44++	.25+			.17	
SHATTER		1.00	.15	-.15	-.06	.06			.02	
PLANTS HARVEST		.15	1.00	-.33++	.16	-.08			.08	
PODS PER PLANT		.15	-.33++	1.00	.41++	.25+			.04	
POD HEIGHT		-.06	.16	.41++	1.00	.31+			.25+	
100 SEED WEIGHT		.06	-.08	.25+	.31+	1.00			-.04	
QUALITY OF SEED		-.02	-.15	-.25+	-.14	-.07			1.00	
PERCENT GERM.		.08	.04	.26+	.25+	-.04			1.00	

TABLE 151 EXPERIMENT 148 YEAR 1978

REGION - SOUTH AMERICA
 SITE - TINGO MARIA
 LATITUDE - 9 DEG. 45 MIN. S
 COOPERATOR - PEDRO RUIZ CUBILLAS
 DATE PLANTED - JUNE 22, 1978
 SOIL TYPE - SAND 31%, SILT 29%, CLAY 40%, PH 5.8
 AMOUNT OF MOISTURE - 704 MM

COUNTRY - PERU
 ELEVATION - 610 M
 LONGITUDE - 75 DEG. 54 MIN. W
 DATE HARVESTED - OCTOBER, 1978
 SOIL TYPE - SAND 31%, SILT 29%, CLAY 40%, PH 5.8
 AMOUNT OF MOISTURE - 704 MM

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	ODULE ABUND 1	ODULE ABUND 2	ODULE ACT. 1	ODULE ACT. 2	PLANT HEIGHT	LOGGING
1	IMPROVED PELICAN	1795.36	35.00	92.00	2.75	2.50	77.50	43.75	43.43	1.00
9	DAVIS	1604.07	35.00	103.00	2.50	2.25	93.75	63.75	25.78	1.00
13	CUTLER 71	1438.20	28.50	98.00	2.50	2.50	83.75	38.75	32.78	1.50
7	JAMES	1398.20	29.50	92.00	2.75	2.75	71.25	50.00	31.00	1.00
6	CORB	1344.85	29.50	103.00	2.25	2.50	96.25	63.75	27.15	2.00
14	MITCHELL	1229.41	29.50	95.00	2.75	2.50	80.00	33.75	33.60	2.00
3	BOSSIER	1176.49	33.00	98.00	2.75	3.00	76.25	30.00	31.68	1.75
4	WILLIAMS	1145.23	28.50	91.75	2.25	2.25	82.50	18.75	29.90	1.25
5	RANSOM	1078.55	28.50	103.00	2.50	2.75	88.75	36.25	23.78	1.00
15	BRAGG	941.02	29.50	95.00	2.75	2.75	91.25	21.25	25.65	1.00
8	FORREST	912.27	29.50	92.00	2.75	3.25	92.50	32.50	30.35	1.75
16	CRAWFORD	839.75	28.50	93.25	2.50	2.50	87.50	32.50	29.90	1.25
10	GASOY 17	758.48	28.50	88.50	2.75	3.00	91.25	33.75	20.00	1.25
11	CALLAND	710.98	28.50	88.50	2.50	2.75	83.75	30.00	28.43	1.00
12	FRANKLIN	699.31	28.50	88.50	2.50	3.50	91.25	20.00	27.00	1.00
2	RILLITO	661.80	29.50	90.00	2.25	2.50	70.00	15.00	29.53	1.25
STANDARD ERROR OF A VARIETY MEAN		1108.37	29.97	94.47	2.56	2.70	84.84	35.23	29.37	1.25
COEFFICIENT OF VARIATION		117.09	.34	1.66	.22	.28	6.79	6.54	1.78	.16
5% LSD VARIETY MEANS (*****=NS)		21.13%	2.25%	3.52%	17.08%	20.51%	16.01%	37.13%	12.09%	25.65%
5% LSD VARIETY MEANS (*****=NS)		333.53	.96	4.74	*****	*****	*****	18.63	5.06	.46
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)										
YIELD KG/HA	1.00	.56++	.37++	-.17	-.41++	.22	.54++	.56++	.07	
DAYS TO FLOWER	.56++	1.00	.21	.06	-.14	-.03	.25+	.39++	-.04	
DAYS TO MATURITY	.37++	.21	1.00	-.32++	-.21	.28+	.49++			
ODULE ABUND 1	-.17	.06	-.32++	1.00	.25+	-.48++	-.51++			
ODULE ABUND 2	-.41++	-.14	-.21	-.25+	1.00	-.06	-.33++	-.34++	-.05	
ODULE ACT. 1	+.22	-.03	+.28+	-.48++	-.06	1.00	.49++	.11	.08	
ODULE ACT. 2	+.54++	+.25+	+.49++	-.51++	-.33++	-.49++	1.00	.30+		
PLANT HEIGHT	+.56++	+.39++	-.05	-.16	-.34++	.11	.30+			
LOGGING	.07	-.04	.07	-.06	-.01	.08	.07	.21	1.00	
SHATTER	-.13	-.05	-.26+	.09	.06	.11	-.19	-.04	-.07	
HARVEST	+.36++	.03	-.02	-.05	-.08	.24	.28+	.22	-.22	
PLANTS PER POD	.62++	.43++	.21	-.09	-.24	.08	.39++	.42++	-.04	
HEIGHT	.36++	.31+	.15	-.12	.04	.06	.28+	.25+		
WEIGHT	.26+	-.14	.26+	-.14	-.39++	.01	.17	.01	-.12	
100 SEED OF SEED	-.42++	-.37++	-.30+	-.05	.25+	.16	-.11	-.45++	-.17	
QUALITY PERCENT	.21	.32++	-.38++	-.02	-.09	.14	.17	.37++	.02	

TABLE 151 EXPERIMENT 148 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
1	IMPROVED PELICAN	1.00	215.00	21.50	6.40	14.93	1.50	72.75	43.4	20.8
9	DAVIS	1.00	174.25	16.25	6.30	18.40	2.75	54.00	41.2	20.2
13	CUTLER 71	1.00	219.75	13.25	7.00	19.33	3.00	38.25	41.1	19.6
7	JAMES	1.00	235.50	16.75	5.75	18.10	3.00	34.75	41.3	21.5
6	COBB	1.00	203.50	17.25	4.50	17.08	3.00	9.50	40.5	21.4
14	MITCHELL	1.00	159.75	12.75	5.15	17.55	2.75	56.25	36.9	22.8
3	ROSSIER	1.00	189.00	13.75	5.85	14.68	2.50	14.50	41.8	21.1
4	WILLIAMS	1.00	175.00	12.75	4.00	19.13	2.25	29.75	43.3	21.3
5	RANSOM	1.00	209.50	15.00	5.10	16.80	3.25	7.50	41.2	24.6
15	BRAGG	1.00	223.75	9.50	5.40	15.18	3.75	33.50	41.6	19.6
8	FORREST	1.00	187.00	14.25	6.05	13.38	3.00	39.25	40.9	19.1
16	CRAWFORD	1.00	142.25	14.00	4.80	18.00	2.25	42.00	42.4	20.4
10	GASOY 17	1.00	181.50	10.25	4.65	15.53	5.00	46.75	41.2	19.9
11	CALLAND	1.00	233.50	11.50	6.00	16.35	5.25	52.00	41.2	18.7
12	FRANKLIN	1.25	204.00	9.25	5.60	15.90	5.00	49.50	40.9	21.8
2	RILLITO	1.00	150.50	13.50	3.60	14.18	3.00	27.00	42.7	20.5
STANDARD ERROR OF A VARIETY MEAN		GRAND MEAN	1.02	193.98	13.84	5.38	16.53	3.20	37.95	
COEFFICIENT OF VARIATION		MEAN	.06	15.91	1.77	.55	.43	.28	6.93	
5% LSD VARIETY MEANS (*****NS)		MEAN	12.31%	25.50%	20.46%	5.15%	17.77%	17.77%	36.51%	
*****NS		MEAN	45.33	5.03	1.57	1.21	.81	.81	19.73	
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	-.13	.36++	.62++	.36++	.38++	.38++	.37++	.21	
DAYS TO FLOWER		-.05	.03	.43++	.31+	-.14	-.42++	.32++		
DAYS TO MATURITY		-.26+	-.02	.21	.15	.26+	.30+	.38++		
NODULE ABUND 1		.09	-.05	-.09	-.12	-.14	-.05	-.02		
NODULE ABUND 2		.06	-.08	-.24	.04	-.39++	.25+	-.09		
NODULE ACT. 1		.11	.24	.08	.06	.01	.16	.14		
NODULE ACT. 2		-.19	.28+	.39++	.28+	.17	-.11	.17		
PLANT HEIGHT		-.04	.22	.42++	.25+	.01	-.12	-.17		
LODGING		-.07	-.22	-.04	.06	-.08	-.12	.02		
SHATTER		1.00	-.04	-.08	.06	-.08	.20	.17		
PLANTS HARVEST		-.04	1.00	.17	.36++	.06	.29+	.09		
PODS PER PLANT		-.08	.17	1.00	.13	.10	-.43++	.15		
POD HEIGHT		.06	.36++	.13	1.00	.08	.04	.26+		
100 SEED WEIGHT		-.08	.06	.10	.08	1.00	-.10	-.07		
QUALITY OF SEED		.20	.29+	-.43++	.04	-.10	1.00	.00		
PERCENT GERM.		.17	.09	.15	.26+	-.07	.00	1.00		

TABLE 152 EXPERIMENT 149 YEAR 1978

REGION - SOUTH AMERICA
 SITE - TINGO MARIA
 LATITUDE - 9 DEG. 18 MIN. S
 COOPERATORS - EDGARDO SEDANO V. AND RAMON RIOS R.
 DATE PLANTED - JULY 8, 1978
 SOIL TYPE - FRANCO, SAND 50%, SILT 72%, CLAY 23%, PH 6.8
 FERTILIZER USED (KG/HA) - N 20.0, P 26.4, K 49.8

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING	C O R R E L A T I O N S	
											++ - PROB=.05	++ - PROB=.01)
3	BOSSIER	2410.07	38.00	101.50	2.00	1.75	.00	.00	91.00	2.00		
16	CRAWFORD	2335.47	31.00	98.00	1.25	1.00	.00	.00	74.50	2.00		
13	CUTLER 71	2320.46	33.00	96.00	1.00	1.50	.00	.00	88.50	2.00		
1	IMPROVED PELICAN	2318.38	34.25	97.00	2.50	1.75	.00	.00	68.75	2.00		
4	WILLIAMS	2057.49	33.25	98.00	1.50	1.00	.00	.00	83.25	1.00		
7	JAMES	2042.91	32.00	88.50	1.25	1.25	.00	.00	63.25	1.00		
8	FORREST	2000.40	31.25	90.00	2.00	1.50	.00	.00	69.50	2.00		
12	FRANKLIN	1982.48	34.50	91.50	2.00	1.75	.00	.00	68.75	2.50		
2	RILLITO	1967.48	34.25	89.50	1.25	1.00	.00	.00	74.75	2.00		
14	MITCHELL	1948.72	38.00	105.00	1.25	1.50	.00	.00	80.50	2.00		
11	CALLAND	1930.39	32.25	98.00	1.50	1.25	.00	.00	59.00	2.00		
5	RANSOM	1820.78	38.50	106.50	1.50	1.50	.00	.00	81.00	2.00		
9	DAVIS	1804.11	31.25	98.00	1.50	1.00	.00	.00	74.00	1.00		
15	BRAGG	1791.19	38.75	104.50	1.50	1.25	.00	.00	61.25	1.00		
6	COBB	1768.27	34.00	96.00	2.75	1.50	.00	.00	82.50	2.50		
10	GASOY 17	1661.58	30.75	89.00	2.00	2.00	.00	.00	52.00	1.00		
GRAND MEAN		2010.01	34.06	96.69	1.67	1.41	.00	.00	73.28	1.75		
STANDARD ERROR OF A VARIETY MEAN		107.65	.23	.37	.33	.34	.00	.00	.58	.10		
COEFFICIENT OF VARIATION		10.71%	1.36%	.76%	39.45%	47.78%	.00%	.00%	1.59%	11.27%		
5% LSD VARIETY MEANS (*****=NS)		306.64	.66	1.04	.94	*****	.00	.00	1.66	.28		
C O R R E L A T I O N S												
	YIELD KG/HA	1.00	.00	.03	-.05	.01	.00	.00	.00	.36++	*24	
	DAYS TO FLOWER	.00	1.00	.72++	.02	.12	.00	.00	.00	.36++	*17	
	DAYS TO MATURITY	.03	.72++	1.00	-.07	-.02	.00	.00	.00	.36++	*40++	
	NODULE ABUND 1	-.05	.02	-.07	1.00	.54++	.00	.00	.00	-.02	*13	
	NODULE ABUND 2	.01	.12	-.02	.54++	1.00	.00	.00	.00	-.04	*14	
	NODULE ACT. 1	.00	.00	.00	.00	.00	1.00	.00	.00	.00	.00	
	NODULE ACT. 2	.00	.00	.00	.00	.00	.00	1.00	.00	.00	.00	
	PLANT HEIGHT	.36++	.36++	.40++	-.02	-.04	.00	.00	.00	1.00	.37++	
	LODGING	.24	.17	.04	.13	.14	.00	.00	.00	.37++	1.00	
	SHATTER	.20	-.14	-.01	-.10	-.14	.00	.00	.00	.40++	.16	
	PLANTS HARVEST	-.11	-.07	.04	.17	-.03	.00	.00	.00	-.22	-.17	
	PODS PER PLANT	.34++	.09	-.25+	.05	.02	.00	.00	.00	-.02	.18	
	POD HEIGHT	.16	.46++	.36++	-.12	.09	.00	.00	.00	.38++	.33++	
	100 SEED WEIGHT	-.22	-.16	.13	-.17	-.09	.00	.00	.00	-.14	-.57++	
	QUALITY OF SEED	-.40++	.04	.02	.06	.19	.00	.00	.00	-.15	-.18	
	PERCENT GERM.	.40++	-.28+	-.03	-.07	.02	.00	.00	.00	.32+	.24	

TABLE 152

EXPERIMENT 149

(CONTINUED)

YEAR 1978

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
3 BOSSIER	2.00	189.75	24.00	6.20	16.68	2.00	97.50	43.4	23.4	23.4
16 CRAWFORD	2.00	179.50	19.00	4.83	20.03	1.00	99.75	43.0	22.4	22.4
13 CUTLER 71	3.00	180.50	19.50	5.43	23.13	2.00	98.75	42.4	22.7	22.7
1 IMPROVED PELICAN	2.00	205.50	33.75	5.58	14.78	1.00	96.50	43.1	21.0	21.0
1 WILLIAMS	3.00	185.50	21.25	5.35	20.63	2.00	98.25	43.3	22.6	22.6
4 JAMES	3.00	190.00	22.75	6.00	19.28	2.00	95.75	42.9	23.0	23.0
7 FORREST	1.00	201.50	16.25	4.65	17.15	3.00	96.00	39.8	24.3	24.3
8 FRANKLIN	2.00	176.00	23.00	5.95	17.15	2.00	98.25	39.9	21.9	21.9
12 RILLITO	2.00	182.00	34.00	5.28	15.48	1.00	97.25	41.8	24.4	24.4
2 MITCHELL	2.00	187.75	19.50	6.28	17.65	2.00	95.25	37.0	24.8	24.8
11 CALLAND	3.00	196.25	20.75	6.15	18.40	2.00	98.75	42.8	20.2	20.2
5 RANSOM	2.00	185.50	15.75	6.28	17.13	3.00	96.25	41.8	24.8	24.8
9 DAVIS	2.00	205.25	14.50	5.18	22.50	2.00	98.25	44.0	23.3	23.3
15 BRAGG	1.00	199.00	19.00	4.73	24.73	2.00	94.50	43.0	21.3	21.3
6 COBB	3.00	197.25	17.50	5.38	19.65	2.00	97.00	40.1	23.5	23.5
10 GASOY 17	1.00	191.75	18.00	4.08	21.58	3.00	94.75	40.2	22.6	22.6
GRAND MEAN	2.13	190.81	21.16	5.46	19.12	2.00	97.05			
STANDARD ERROR OF A VARIETY MEAN	.00	5.14	.92	.14	.18	.00	.64			
COEFFICIENT OF VARIATION	.00%	5.39%	8.71%	5.08%	1.83%	.00%	1.31%			
5% LSD VARIETY MEANS (*****=NS)	.00	14.64	2.62	.39	.50	.00	1.81			
C O R R E L A T I O N S	(+ - PROB=.05	(+ - PROB=.05	(+ - PROB=.05	(+ - PROB=.01)	(+ - PROB=.01)	(+ - PROB=.01)	(+ - PROB=.01)	(+ - PROB=.01)	(+ - PROB=.01)	(+ - PROB=.01)
YIELD KG/HA	.20	-.11	.34++	.16	-.22	-.40++	.40++			
DAYS TO FLOWER	-.14	-.07	.09	.46++	-.16	.04	-.28+			
DAYS TO MATURITY	-.01	-.04	-.25+	.36++	.13	.02	-.03			
NODULE ABUND 1	-.10	-.17	-.05	-.12	-.17	.06	-.07			
NODULE ABUND 2	-.14	-.03	.02	.00	-.09	.19	.02			
NODULE ACT. 1	.00	-.00	.00	.00	.00	.00	.00			
NODULE ACT. 2	.00	-.00	.00	.00	.00	.00	.00			
HEIGHT PLANT	.40++	-.22	-.02	.38++	-.14	.15	.32+			
LODGING	.16	-.17	.18	.33++	-.57++	-.18	.24			
SHATTER	1.00	-.17	.10	.51++	-.02	.29+	.44++			
PLANTS HARVEST	-.17	1.00	-.11	-.18	.04	.09	-.25			
PODS PER PLANT	.10	-.11	1.00	.18	-.56++	.04				
POD HEIGHT	.51++	-.18	.18	1.00	-.44++	-.10	.13			
100 SEED WEIGHT	-.02	-.04	-.56++	-.44++	1.00	.21	-.02			
QUALITY OF SEED	-.29+	.09	-.66++	-.10	.21	1.00	-.36++			
GERM. PERCENT	.44++	-.25	.04	.13	-.02	-.36++	1.00			

TABLE 153 EXPERIMENT 4 YEAR 1978

REGION - SOUTH AMERICA
 COUNTRY - VENEZUELA
 SITE - BARINAS
 ELEVATION - 180 M
 LATITUDE - 8 DEG. 37 MIN. N
 LONGITUDE - 70 DEG. 12 MIN. W
 COOPERATOR - RAUL NINO
 DATE HARVESTED - NOVEMBER, 1978
 DATE PLANTED - JULY 20, 1978
 SOIL TYPE - SAND 71.8%, SILT 14.1%, CLAY 14.1%
 FERTILIZER USED (KG/HA) - N 48.0, P 96.0, K 48.0
 AMOUNT OF MOISTURE - 926 MM

TABLE 153 EXPERIMENT 4 YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
7	TUNIA	1.00	63.75	35.50	10.00	19.83	3.00	.00	46.4	22.9
2	UFV-1	1.00	124.25	40.00	9.00	19.68	3.75	.00	47.3	20.3
12	RILLITO	1.00	112.25	46.00	6.25	20.73	2.50	.00	22.6	23.3
9	JUPITER	1.00	107.50	47.50	9.25	23.80	3.50	.00	46.5	24.2
4	HARDEE LS	1.00	57.75	80.00	10.00	23.38	3.00	.00	46.5	24.0
16	CORB	2.00	174.25	32.00	7.25	20.10	3.25	.00	45.3	24.6
13	BOSSIER	1.00	136.75	38.00	12.25	18.25	3.25	.00	47.7	22.6
15	RANSOM	2.00	182.50	22.25	7.00	21.73	3.25	.00	45.5	25.6
14	WILLIAMS	1.00	200.75	19.25	8.00	21.93	3.25	.00	46.3	22.8
6	JAC-2	2.00	101.25	44.50	12.75	17.95	3.50	.00	47.9	21.4
10	IMPROVED FELICAN	1.00	195.50	31.50	12.25	15.60	3.50	.00	47.1	23.4
11	NAHALA	3.00	119.25	31.25	7.75	20.10	3.75	.00	45.4	23.3
8	CARIBE	1.00	97.25	40.50	13.00	16.53	3.50	.00	50.2	19.0
5	OREBA	5.00	143.75	38.25	11.75	15.88	3.00	.00	46.5	21.6
3	SJ-2	2.00	87.25	38.25	10.00	16.73	3.00	.00	47.4	21.2
1	CH-3	1.00	136.00	34.00	11.50	16.30	2.50	.00	48.2	22.3
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
CORRELATIONS										
++ - PROB=.05										
++ - PROB=.01)										
YIELD KG/HA										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE ABUND 1										
NODULE ABUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
PLANT HEIGHT										
LODGING										
SHATTER										
PLANTS HARVEST										
PODS PER PLANT										
POD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										

